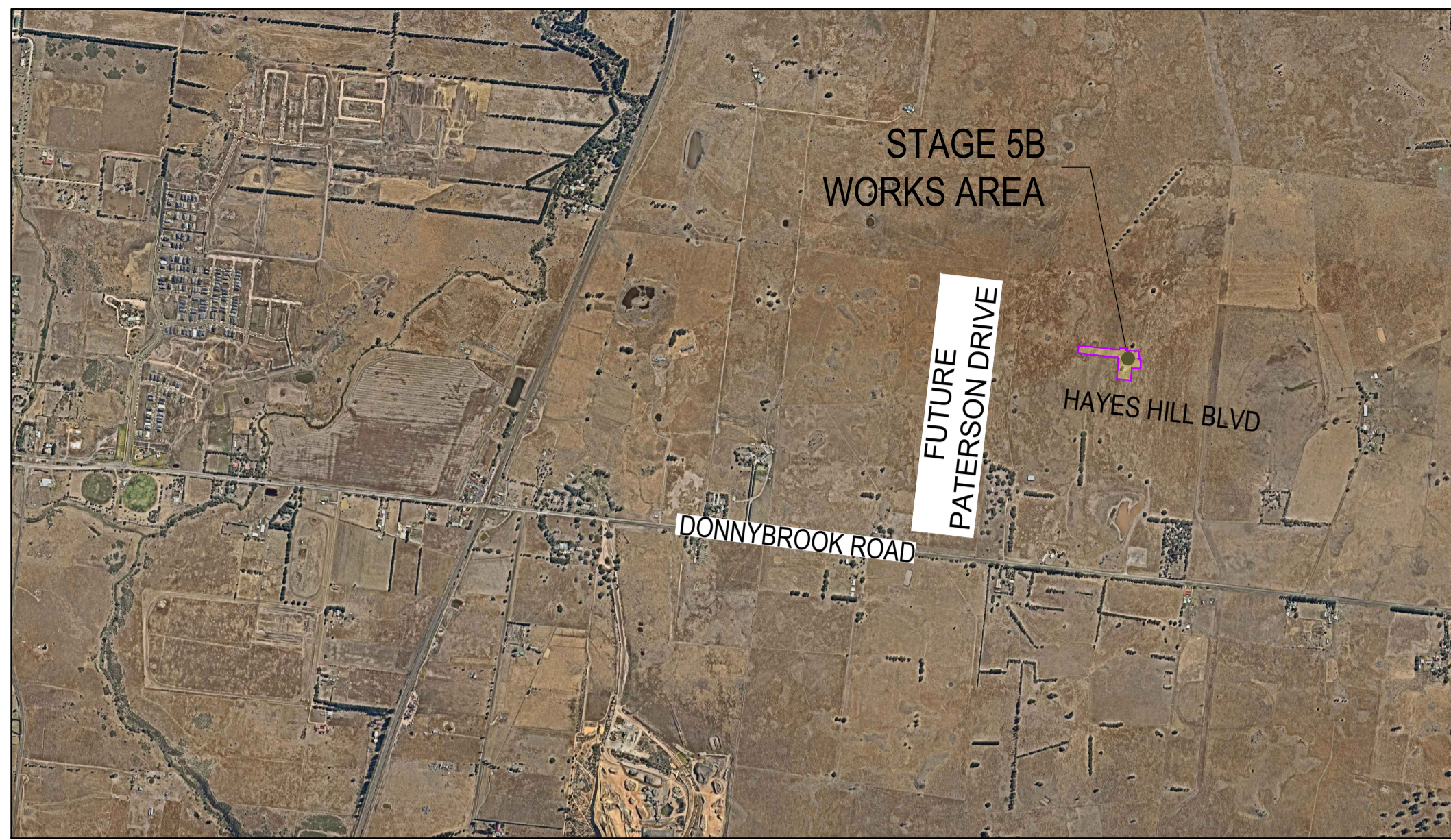


# Olivine Estate Stage 5B



## GENERAL NOTES (WHITTLESEA CITY COUNCIL)

- THE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE VPA MANUAL AND SPECIFICATIONS. WORKS TO BE CARRIED OUT TO THE SATISFACTION OF COUNCIL'S SUPERVISING OFFICER.
- THE CONTRACTOR IS RESPONSIBLE FOR SAFETY OF WORK ON SITE IN ACCORDANCE WITH APPROPRIATE LEGISLATION. THEY SHALL ERECT AND MAINTAIN ALL SHORING, PLANKING AND STRUTTING, DEWATERING DEVICES, BARRICADES, SIGNS, LIGHTS, ETC. NECESSARY TO KEEP WORKS IN A SAFE AND STABLE CONDITION, AND TO PROTECT THE PUBLIC FROM HAZARDS ASSOCIATED WITH THE WORKS.
- THE CONTRACTOR SHALL:
  - COMPLY WITH THE SAFETY REQUIREMENTS OF THE MINES ACT, GENERAL REGULATIONS AND STATUTORY RULES, AND THE MINES (TRENCHES) REGULATIONS 1982.
  - NOTIFY THE OCCUPATIONAL HEALTH AND SAFETY AUTHORITY OF HIS INTENTION TO COMMENCE TRENCHING OPERATIONS WHERE TRENCHES ARE 1.5 METRES OR DEEPER.
  - ENSURE THAT THE MINE MANAGER OR HIS DEPUTY AS REQUIRED BY THE REGULATIONS IS IN ATTENDANCE WHEN TRENCHING OPERATIONS ARE IN PROGRESS.
- THE CONTRACTOR IS TO NOTIFY COUNCIL AND ALL SERVICE AUTHORITIES SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE LOCATION OF EXISTING SERVICES SHOULD BE DETERMINED BY THE CONTRACTOR PRIOR TO COMMENCING ANY EXCAVATION BY CONTACTING ALL RELEVANT SERVICE AUTHORITIES. ANY EXISTING SERVICES SHOWN ON THE DRAWINGS ARE OFFERED AS A GUIDE ONLY AND ARE NOT GUARANTEED AS CORRECT.
- REDGUM TREES MARKED ON THE APPROVED PLANS FOR REMOVAL MUST BE REMOVED IN ACCORDANCE WITH COUNCIL'S PLANNING PERMIT. NO EXCAVATION SHALL BE CARRIED OUT WITHIN 5.0m OF ANY EXISTING TREE WITHOUT WRITTEN APPROVAL FROM COUNCIL'S SUPERVISING OFFICER.
- ALL ROAD CHAINAGES ARE MEASURED ALONG THE ROAD CENTRELINE EXCEPT KERB RETURNS AND COURTHEADS, WHERE LIP OF KERB CHAINAGES ARE SPECIFIED. ALL DIMENSIONS AND RADII ARE GIVEN TO THE LIP OF KERB. DO NOT SCALE OFF THESE DRAWINGS, WRITTEN DIMENSIONS ONLY SHALL BE USED.
- ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM.
- WHEN ENGAGED IN BLASTING OPERATIONS THE CONTRACTOR SHALL NOT BLAST WITHIN 4.5m OF AN EXISTING LINE OF WATER, GAS OR SEWER PIPES OR WITHIN 15m OF ANY COMPLETED PART OF THE WORKS WITHOUT THE CONSENT OF THE SUPERINTENDENT. BLASTING REQUIRES A BLASTING PERMIT FROM COUNCIL.
- ALL EXCAVATED OR FILLED AREAS OUTSIDE THE ROAD RESERVES TO BE STRIPPED OF TOPSOIL AND STOCKPILED PRIOR TO EARTHWORKS COMMENCING. THESE AREAS SHALL BE SURFACED WITH A 100mm MINIMUM TO 200mm MAXIMUM LAYER OF TOPSOIL AS SPECIFIED.
- NO TOPSOIL TO BE REMOVED FROM SITE.
- NO FILL OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE UNLESS DIRECTED BY THE SUPERINTENDENT.
- FILLING ON ALLOTMENTS AND UNDER ROAD PAVEMENTS TO HAVE LEVEL 1 SUPERVISION IN ACCORDANCE WITH AS3798-1996. INDIVIDUAL LOT CERTIFICATES ARE TO BE PROVIDED TO THE SUPERINTENDENT.
- FILLING UNDER DRIVEWAYS AND FOOTPATH IS TO BE APPROVED BY THE SUPERINTENDENT AND CONSTRUCTED IN LAYERS 150mm DEPTH. COMPACTION ACHIEVING 98% AUSTRALIAN STANDARD DENSITY.
- CUT AND FILL BATTERS ARE NOT TO EXCEED 1 in 6 UNLESS SHOWN OTHERWISE.
- ALLOTMENTS TO BE GRADED TO ENSURE A MINIMUM GRADE OF 1 in 150.
- ALL DRAINAGE PIPES UP TO AND INCLUDING 750mm IN DIAMETER SHALL BE RUBBER RING JOINTED. PIPES ABOVE THIS SIZE MUST BE FLUSH JOINTED WITH EXTERNAL SEALING BANDS.
- ALL DRAINAGE TRENCHES UNDER ROAD PAVEMENTS, KERB & CHANNEL, PARKING BAYS, DRIVEWAYS, FOOTPATHS AND BEHIND KERBS & CHANNEL SHALL BE BACKFILLED WITH CRUSHED ROCK AS SPECIFIED.
- ALL PITS GREATER THAN OR EQUAL TO 900mm DEPTH TO BE PROVIDED WITH STEP IRONS IN ACCORDANCE WITH SD1041 AND COUNCIL STANDARD DRAWING EDCM 609.
- PROPERTY INLETS AS PER WHITTLESEA CITY COUNCIL STANDARD DRAWING EDCM 701-704 AND ARE TO BE LOCATED 1.0m FROM LOW SIDE BOUNDARY UNLESS SHOWN OTHERWISE.
- ALL HOUSE DRAIN CONNECTIONS ARE TO BE LOCATED NO CLOSER THAN 7.0m FROM THE SIDE BOUNDARY OR FROM EASEMENT ALONG THE SIDE BOUNDARY UNLESS NOTED OTHERWISE AND CONNECTED DIRECTLY TO UNDERGROUND DRAIN OR PIT. HOUSE DRAIN LOCATION TO BE MARKED (50mm STAMPED IMPRESSION) ON THE TOP OF THE KERB. SUBSOIL DRAINS SHALL BE INSTALLED BEHIND OR BELOW ALL KERB AND CHANNEL AS PER STANDARD DRAWING EDCM 202.
- CONDUIT LOCATIONS ARE SUBJECT TO AMENDMENT AND CONDUITS SHALL NOT BE LAID UNTIL WRITTEN APPROVAL IS GIVEN BY THE SUPERINTENDENT. CONDUITS TO BE EXTENDED TO PROPERTY LINE AND ARE REQUIRED WHEN CONNECTIONS EXTEND UNDER ROAD PAVEMENT, FOOTPATH OR OTHER INFRASTRUCTURE. BOTH KERBS ARE TO BE MARKED WITH THE LETTERS H (PROPERTY STORMWATER CONNECTION), E (ELECTRICAL), G (GAS), T (TELEPHONE), W (WATER) AND C (COUNCIL COMMUNICATION) AS PER STANDARD DRAWING EDCM 303.
- ALL SERVICING TRENCHES UNDER ROADS, DRIVEWAYS, FOOTPATHS ETC. ARE TO BE BACKFILLED & COMPACTED WITH F.C.R. IN THE CASE OF TRENCHES UNDER ROADS WHERE BACKFILLING HAS NOT ACHIEVED THE SPECIFIED COMPACTION OR SHOWS EXCESSIVE MOVEMENT UNDER PROFFROLLING, THE BACKFILLING SHALL BE REMOVED AND REPLACED WITH 2% STABILISED COMPACTED F.C.R. ALL SERVICES ARE TO BE PLACED PRIOR TO THE CAPPING LAYER. NO TELSTRA PITS ARE TO BE LOCATED IN THE FOOTPATH.
- VEHICULAR CROSSINGS TO BE LOCATED CLEAR OF DRAINAGE PITS, SEWER MAINTENANCE HOLES AND EXISTING TREES. VEHICLE CROSSINGS TO BE 1.5m FROM PROPERTY BOUNDARY OR EASEMENT UNLESS OTHERWISE SHOWN. VEHICULAR CROSSINGS TO BE CONSTRUCTED AS PER WHITTLESEA CITY COUNCIL'S SPECIFICATIONS AND EDCM 501 TO 503.
- ALL PEDESTRIAN CROSSING THROUGH SPLITTER ISLANDS TO BE IN ACCORDANCE WITH SD606.
- ALL STREET SIGNS TO BE IN ACCORDANCE WITH SD812. STREET SIGNS TO BE ATTACHED TO LIGHT POLES USING 'SINGLE DIRECTION COLLAR' OR '90° RIGHT ANGLE COLLAR' UNLESS SHOWN OTHERWISE.
- ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS SHOULD BE TO AS1742.2 AND AS1742.1 STANDARD RESPECTIVELY. TEMPORARY LINEMARKING TO BE PLACED DURING MAINTENANCE PERIOD PRIOR TO PLACEMENT OF WEARING COURSE. FINAL LINEMARKING TO BE LONG LIFE ROAD MARKING WITH LONGITUDINAL LINES IN THERMOPLASTIC AND TRANSVERSE MARKINGS IN COLD APPLIED.
- THE CAPPING LAYER MUST BE DEMONSTRATED THROUGH TESTING THAT ITS PROPERTIES (CBR, PERMEABILITY, ETC.) SATISFY LIMITS AS OUTLINED IN THE TECHNICAL SPECIFICATION TABLE 20.3.5B WITH A MINIMUM MODULAS OF 100MPa.
- UPON COMPLETION OF CONSTRUCTION THE WHOLE SITE SHALL BE CLEANED UP, GRADED, ALL RUBBISH REMOVED AND LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERINTENDENT.
- ALL FOOTPATHS & SHARED PATHS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH EDCM 401.

## Drawing Index

- 1700E-05B-01 Cover Plan
- 1700E-05B-02 Layout Plan
- 1700E-05B-03 Typical Cross Sections
- 1700E-05B-04 Longitudinal Sections - 1
- 1700E-05B-05 Longitudinal Sections - 2
- 1700E-05B-06 Cross Sections: Hayes Hill Boulevard Ch 304.25 - Ch 370.81
- 1700E-05B-07 Cross Sections: Hayes Hill Boulevard Ch 392.25 - Ch 448.32
- 1700E-05B-08 Cross Sections: Hayes Hill Boulevard Ch 491.20 - Ch 539.97
- 1700E-05B-09 Cross Sections: Olivine Boulevard Ch 1122.59 - Ch 1169.39
- 1700E-05B-10 Cross Sections: Olivine Boulevard Ch 1188.60 - Ch 1244.98
- 1700E-05B-11 Intersection Detail Plan & Lip Profiles - 1
- 1700E-05B-12 Intersection Detail Plan & Lip Profiles - 2
- 1700E-05B-13 Intersection Detail Plan & Lip Profiles - 3
- 1700E-05B-14 Drainage Longitudinal Sections
- 1700E-05B-15 Pit Schedule
- 1700E-05B-16 Signs & Linemarking Plan - 1
- 1700E-05B-17 Signs & Linemarking Plan - 2
- 1700E-05B-18 Pavements Details
- 1700E-05B-19 Earthworks Plan
- 1700E-05B-85 Safety in Design

**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.  
Locate all underground services before commencement of works  
**DIAL 1100 BEFORE YOU DIG**  
www.1100.com.au

## NOTES FOR WORKS UNDER OVERHEAD ELECTRICAL POWERLINES

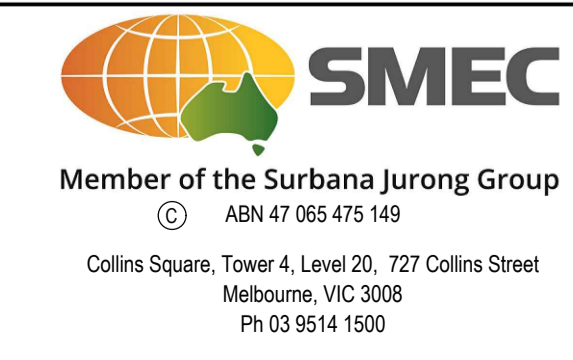
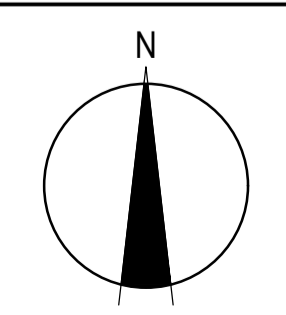
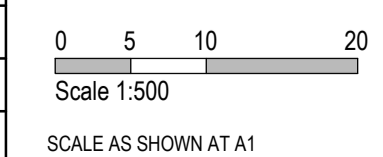
- MAINTENANCE AND REFUELLING OF VEHICLES AND EQUIPMENT MUST NOT BE CARRIED OUT UNDER POWERLINES
- THE STORAGE OR HANDLING OF FLAMMABLE LIQUIDS OR GASSES IS NOT PERMITTED UNDER POWERLINES
- THE PARKING OF LARGE VEHICLES OR CARAVANS, SITE HUTS OR SIMILAR IS NOT PERMITTED UNDER POWERLINES
- STOCKPILING OF EXCAVATED MATERIAL IS NOT PERMITTED UNDER POWERLINES
- VEHICLES AND EQUIPMENT EXCEEDING 3 METRES MAXIMUM OPERATING HEIGHT ARE NORMALLY NOT PERMITTED UNDER AUSNETS POWERLINES. A HIGHER OPERATING HEIGHT LIMIT IS SUBJECT TO SUFFICIENT CLEARANCE TO THE CONDUCTORS AND WRITTEN APPROVAL
- SP AUSNET'S LINES CONTRACT SUPERVISOR MUST BE NOTIFIED AT LEAST 10 WORKING DAYS PRIOR TO THE WORKS COMMENCING SO THAT APPROPRIATE PERMITS CAN BE ARRANGED. ADDITIONAL SAFETY PRECAUTIONS DEEMED NECESSARY WILL BE ADVISED AT THIS TIME. ALL PERSONS COMMENCING WORK ON THE SITE MUST BE MADE AWARE OF PERMIT CONDITIONS AND SAFETY PRECAUTIONS
- ALL WORK IN THE VICINITY MUST BE IN ACCORDANCE WITH THE INDUSTRIES NO GO ZONE REQUIREMENTS AND SP AUSNET MUST BE SATISFIED THAT ALL SUB CONTRACTORS WORKING IN THE AREA IN THE VICINITY OF THE OVERHEAD LINES WORK WITHIN THESE GUIDELINES, INCLUDING THE PROVISION OF A SPOTTER AS REQUIRED.

ROAD NAME	SERVICES OFFSET SCHEDULE									
	GAS		NON-DRINKING WATER		DRINKING WATER		ELECTRICITY		NBN	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
HAYES HILL BOULEVARD (WEST OF OLIVINE BLVD)	SOUTH	1.85	SOUTH	2.55	SOUTH	3.05	SOUTH	4.10	SOUTH	3.50
HAYES HILL BOULEVARD (CH4.36.23 TO INTERSECTION)	NORTH	2.10	NORTH	2.60	NORTH	3.10	SOUTH	6.95	SOUTH	6.25
HAYES HILL BOULEVARD (EAST OF OLIVINE BLVD)	NORTH	2.10	NORTH	2.60	NORTH	3.10	SOUTH	2.70	SOUTH	1.85
OLIVINE BOULEVARD	EAST	2.10	EAST	2.60	EAST	3.10	WEST	4.30	WEST	3.60
OLIVINE BOULEVARD (NORTH OF INTERSECTION)	EAST	2.10	EAST	2.80	EAST	3.30	WEST	4.30	WEST	3.60

\* STREET TREES TO BE INSTALLED IN THE CENTRE OF NATURE STRIPS AND MEDIANS UNLESS DIRECTED OTHERWISE BY COUNCIL

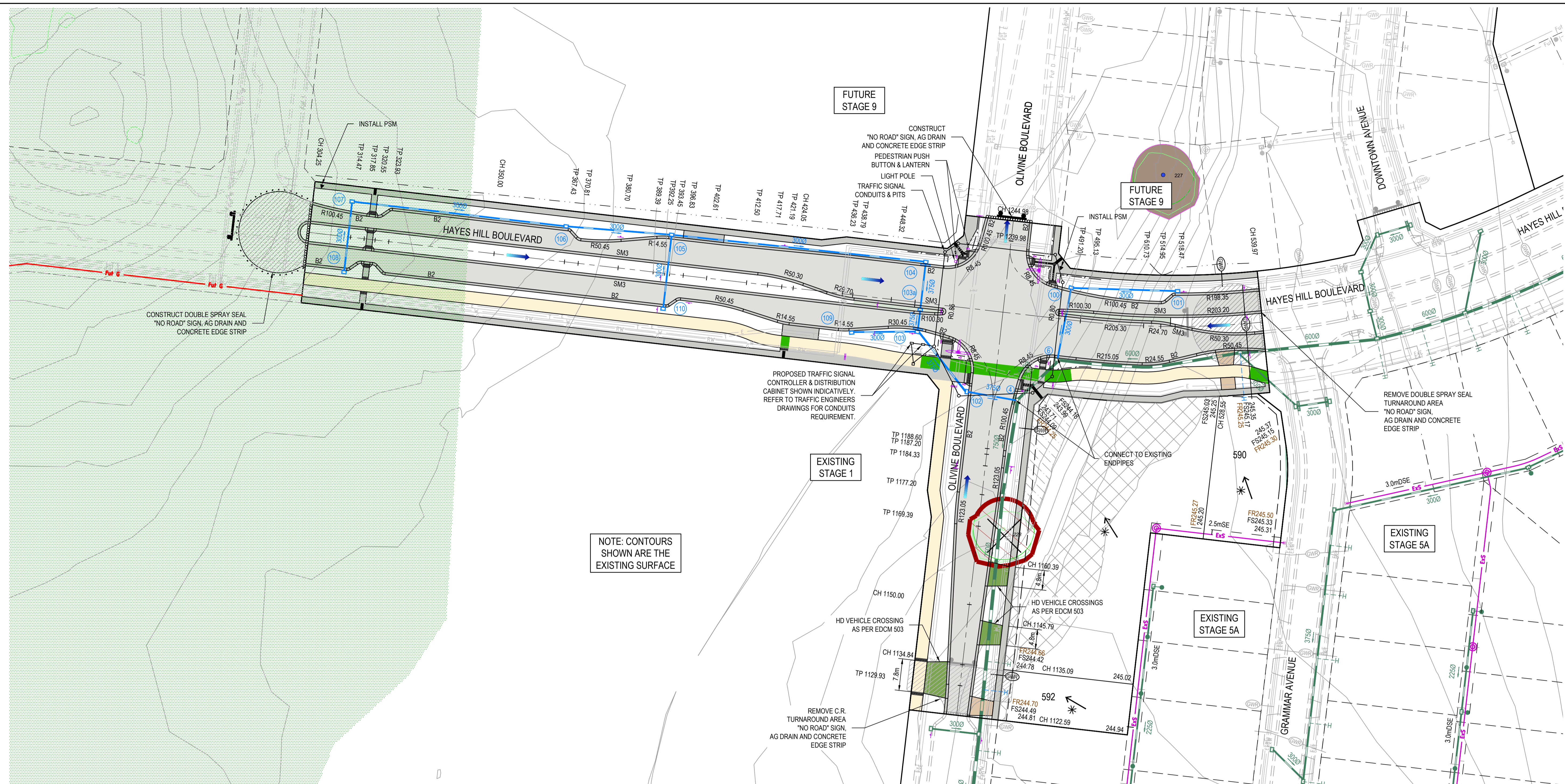
ROAD NAME	ROAD LAYOUT TABLE							
	RESERVE WIDTH (m)	ROAD WIDTH (m)			KERB TYPE		VERGE WIDTH (m)	
		LIP to LIP	INV to INV	BACK to BACK	NTH/WEST	STH/EAST	NTH/WEST	STH/EAST
HAYES HILL BOULEVARD	30.00	11.10	12.00	12.30	B2	B2	6.60	11.40
OLIVINE BOULEVARD	22.00	5.10	6.00	6.30	B2	B2	6.45	4.95

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL	TITLE	NAME
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB	DRAFTER	R.Barua
1	06.08.19	SERVICES OFFSET TABLE AMENDED	KM/KM	AB	DESIGNER	S.MacLaren
2	05.09.19	SERVICES OFFSET TABLE AMENDED	ZG/MA	AB	CHECKED	Z.Gosev
3	21.02.20	AS CONSTRUCTED	SM/SM	AB	AUTHORISED	A.Burrows
					REFERENCE No. 1	
					REFERENCE No. 2	



Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Cover Plan

MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-01</b>	SHEET No. <b>01 of 20</b>	REVISION <b>3</b>
---------------------------	--	------------------------------	----------------------



NOTE: CONTOURS SHOWN ARE THE EXISTING SURFACE

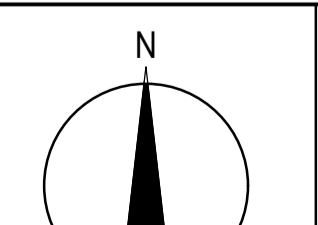
**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
 The locations of underground services are approximate only and their exact position should be proven on site. No guarantee is given that all existing services are shown. Locate all underground services before commencement of works **DIAL 1100 BEFORE YOU DIG**  
 www.1100.com.au

LEGEND - LAYOUT PLAN		EXISTING HOUSE DRAIN		FUTURE SERVICE CONDUITS		EDGE STRIP, SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER	
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY		---H---	EXISTING HOUSE DRAIN	---	FUTURE SERVICE CONDUITS	---	EDGE STRIP, SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER
[Symbol]	STORMWATER DRAIN, PIT & PROPERTY INLET	-Ex E-	EXISTING ELECTRICITY (UNDER GROUND)	[Symbol]	FUTURE TACTILE PAVERS	[Symbol]	EXISTING RED GUM TREE & CANOPY TO BE REMOVED
[Symbol]	MAIN DRAIN	-Ex G-	EXISTING GAS	---	ZERO LOT LINES	[Symbol]	EXISTING OTHER SPECIES TREE & CANOPY TO BE REMOVED
[Symbol]	SWALE DRAIN	-Ex T-	EXISTING TELSTRA	141.34	EXISTING SURFACE LEVEL	[Symbol]	EXISTING RED GUM TO BE RETAINED
[Symbol]	SEWER & MAINTENANCE STRUCTURES	-Ex W-	EXISTING WATER	FS140.35	FINISHED BUILDING LINE LEVEL	[Symbol]	EXISTING OTHER SPECIES TO BE RETAINED
[Symbol]	HOUSE DRAIN	-Ex RW-	EXISTING RECYCLED WATER	FR157.40	FINISHED RIDGE LINE LEVEL	[Symbol]	PERMANENT SURVEY MARK
[Symbol]	ELECTRICITY (U.GROUND)	-Ex Ag-	EXISTING AG. DRAIN	CH270.00	CHAINAGE	[Symbol]	TEMPORARY BENCH MARK
[Symbol]	GAS	[Symbol]	M	TW159.60	TOP OF RETAINING WALL LEVEL	[Symbol]	PROPOSED DRIVEWAY & FOOTPATH
[Symbol]	TELSTRA	[Symbol]	EXISTING TACTILE PAVERS	BW159.00	BOTTOM OF RETAINING WALL LEVEL	[Symbol]	PROPOSED SHARED FOOTPATH
[Symbol]	WATER	[Symbol]	FUTURE STORMWATER DRAIN	[Symbol]	EXISTING RETAINING WALL	[Symbol]	PROPOSED ROAD PAVING
[Symbol]	RECYCLE WATER	[Symbol]	FUTURE MAIN DRAIN	[Symbol]	RETAINING WALL	[Symbol]	PROPOSED DIRECTIONAL FENCING AS PER SDL 3.18
[Symbol]	AG. DRAIN	[Symbol]	FUTURE SWALE DRAIN	[Symbol]	FUTURE RETAINING WALL	[Symbol]	
[Symbol]	TRAFFIC SIGNAL CONDUITS & PITS	[Symbol]	FUTURE SEWER & MAINTENANCE STRUCTURES	[Symbol]	STRUCTURAL FILL > 200mm DEEP	[Symbol]	
[Symbol]	SERVICE CONDUITS	[Symbol]	FUTURE HOUSE DRAIN	[Symbol]	EXISTING STRUCTURAL FILL > 200mm DEEP	[Symbol]	
[Symbol]	TACTILE PAVERS	[Symbol]	FUTURE ELECTRICITY (UNDER GROUND)	[Symbol]	CUT > 200mm DEEP	[Symbol]	
[Symbol]	EXISTING STORMWATER DRAIN	[Symbol]	FUTURE GAS	[Symbol]	DIRECTION OF FALL	[Symbol]	
[Symbol]	EXISTING MAIN DRAIN	[Symbol]	FUTURE TELSTRA	[Symbol]	OVERLAND FLOW	[Symbol]	
[Symbol]	EXISTING SWALE DRAIN	[Symbol]	FUTURE WATER	[Symbol]	GRADED IN DIRECTION OF FALL TO LEVEL INDICATED	[Symbol]	
[Symbol]	EXISTING SEWER & MAINTENANCE STRUCTURES	[Symbol]	FUTURE RECYCLED WATER	[Symbol]		[Symbol]	
[Symbol]		[Symbol]	FUTURE AG. DRAIN	[Symbol]		[Symbol]	

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	25.07.19	IRRIGATION CONDUITS REMOVED	MA/MA	AB
2	21.02.20	AS CONSTRUCTED	KM/KM	AB

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins Street  
 Melbourne, VIC 3008  
 Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 5B  
 Whittlesea City Council  
 Road and Drainage  
 Layout Plan

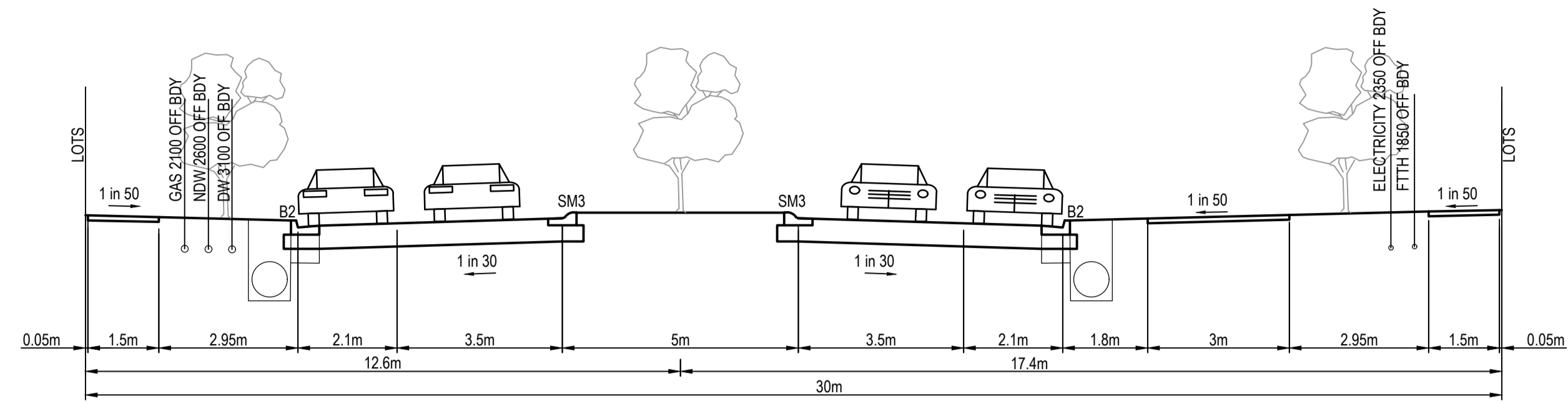
**AS CONSTRUCTED**

Quality Management ISO 9001  
 Global Mark.com.au

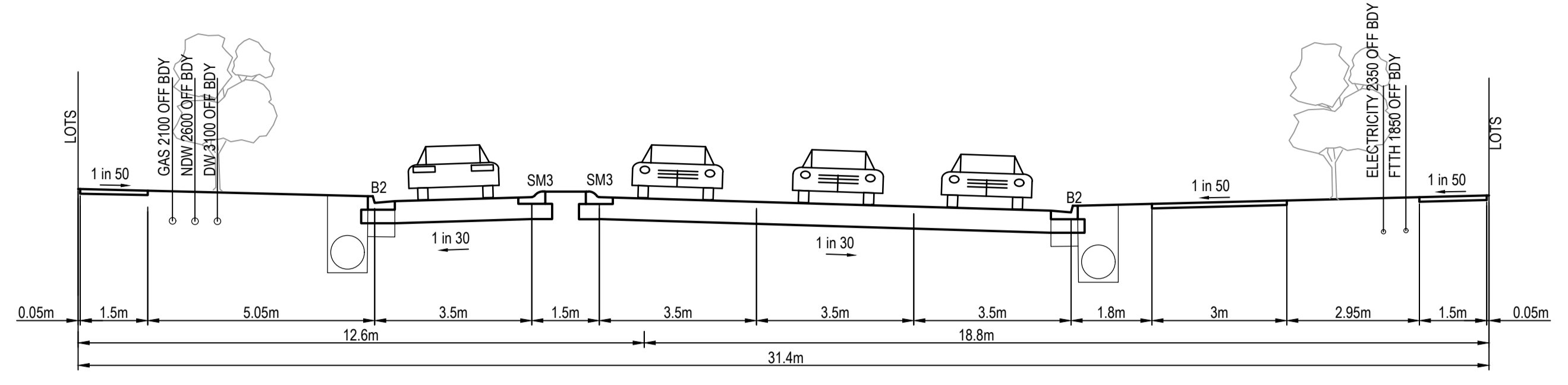
OH&E Management AS/NZS 4801  
 Global Mark.com.au

Environmental Management ISO 14001  
 Global Mark.com.au

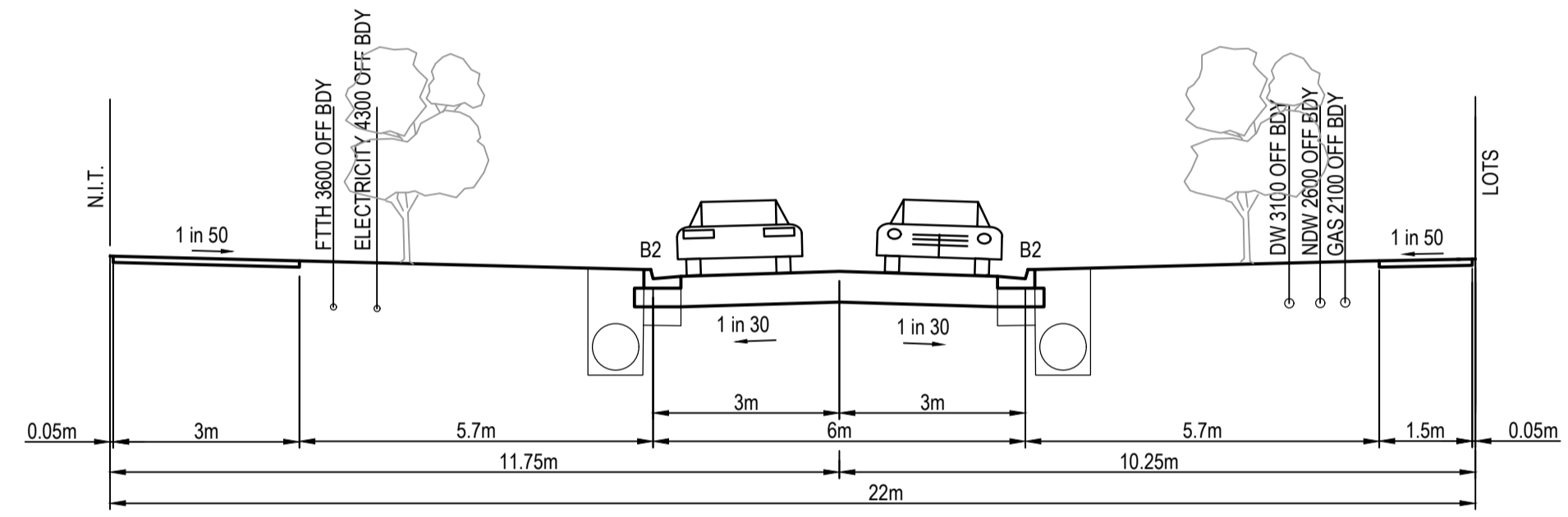
MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
8M2	1700E-05B-02	02 of 20	2



**HAYES HILL BOULEVARD**



**HAYES HILL BOULEVARD TURN POCKET**



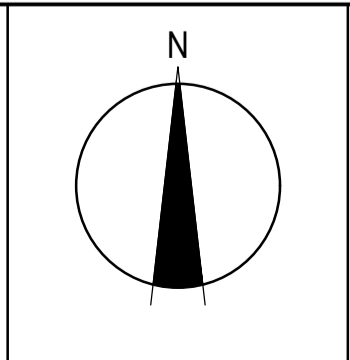
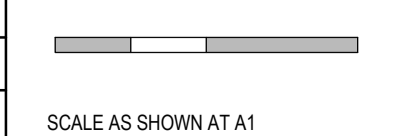
**22.0m MODIFIED ACCESS STREET 2  
OLIVINE BOULEVARD**

**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. Locate all underground services before commencement of works.  
**DIAL 1100 BEFORE YOU DIG**  
 www.1100.com.au

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins Street  
 Melbourne, VIC 3008  
 Ph 03 9514 1500

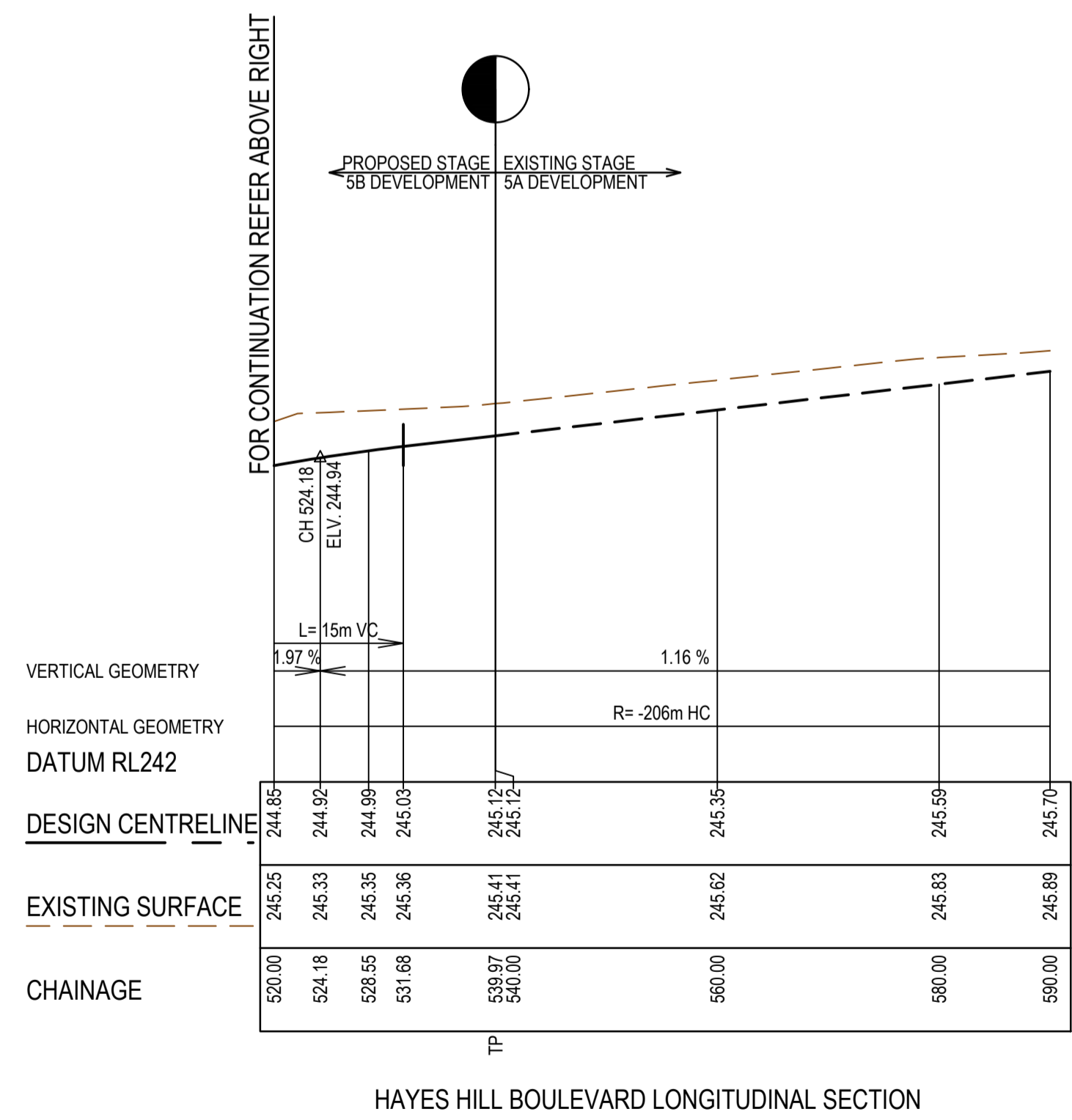
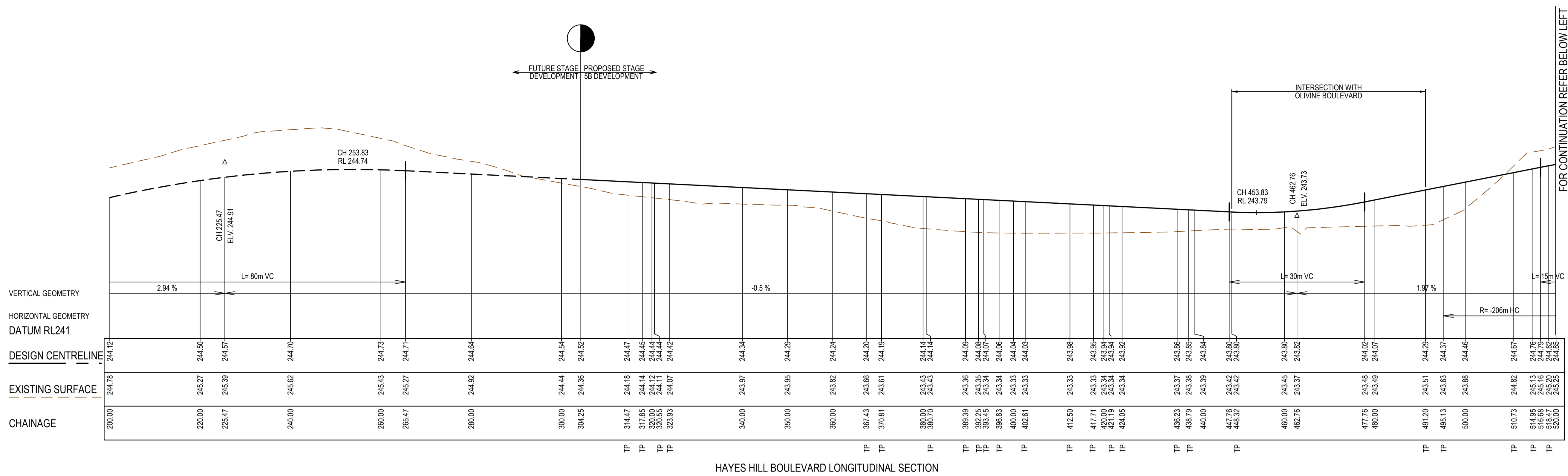
**mirvac**

Olivine Estate - Stage 5B  
 Whittlesea City Council  
 Road and Drainage  
 Typical Cross Sections

**AS CONSTRUCTED**

MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
8M2	1700E-05B-03	03 of 20	1

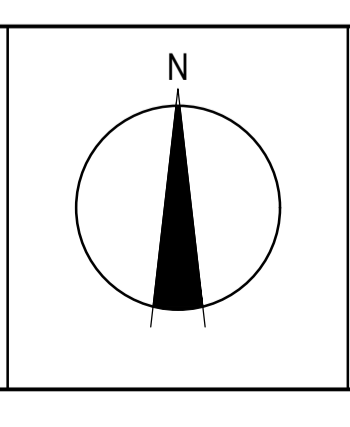
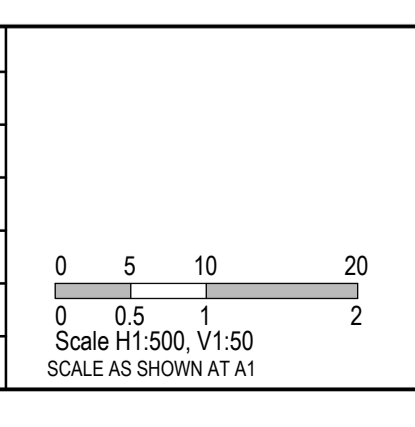
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

**AS CONSTRUCTED**

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



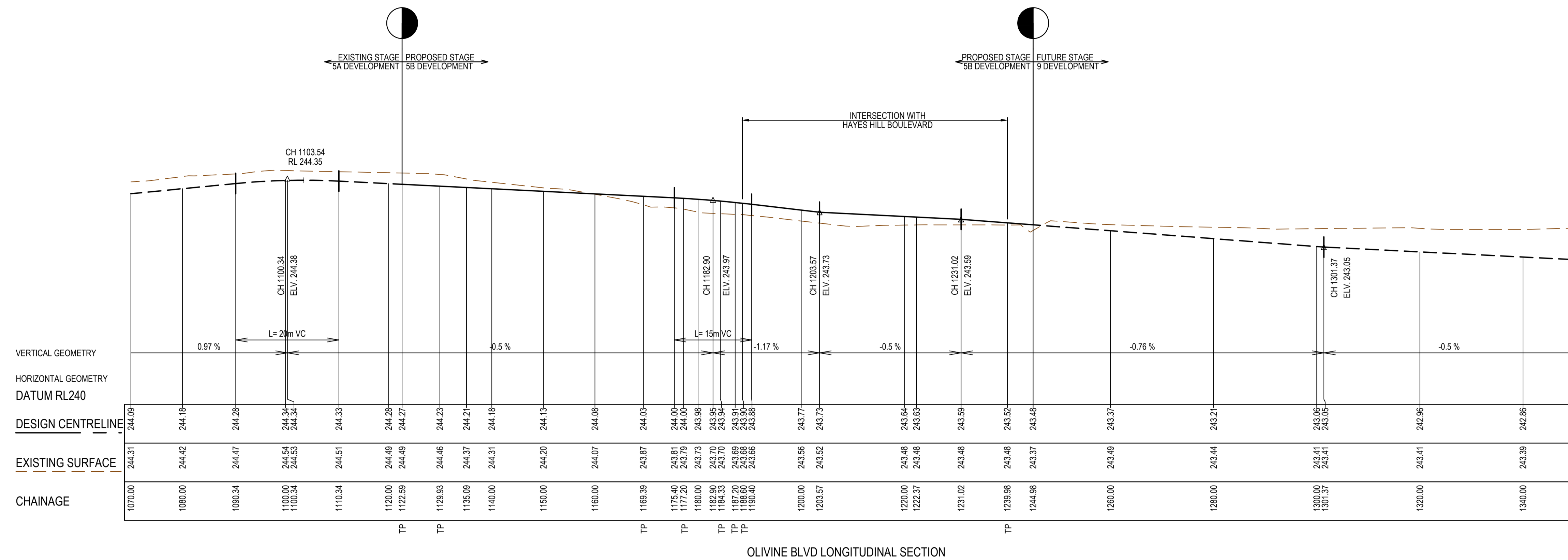
**SMEC**  
Member of the **Surbana Jurong Group**  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins Street  
Melbourne, VIC 3008  
Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Longitudinal Sections - 1

MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-04</b>	SHEET No. <b>04 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------

STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



**HAYES HILL BOULEVARD DESIGN LINE**

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	304.251	322944.184	5843595.552	244.520	IP	96°33'19.98"		
	495.133	323133.818	5843573.760	244.366	TC	96°33'19.98"		
2	517.564	323156.192	5843571.189	244.808	IP		44.863	-206.000
3	539.97	323178.592	5843573.513	245.122	IP	84°04'39.29"		

**OLIVINE BOULEVARD DESIGN LINE**

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	1122.590	323103.380	5843476.824	233.709	IP	6°33'20.00"		
2	1222.368	323114.772	5843575.949	234.677	IP			
3	1244.974	323117.341	5843598.409	234.896	IP	6°31'30.13"		

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

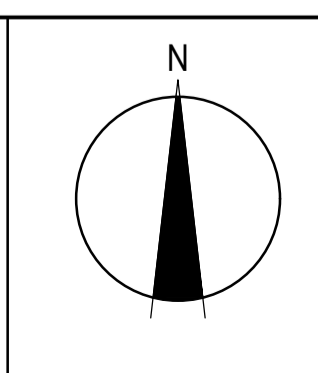
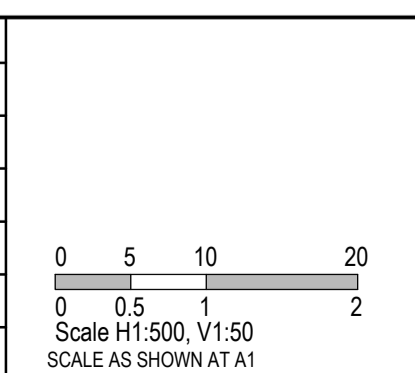
**AS CONSTRUCTED**

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

Quality Management - ISO 9001  
 OHS Management - AS/NZS 1800  
 Environmental Management - ISO 14001

Global-Mark.com.au®

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



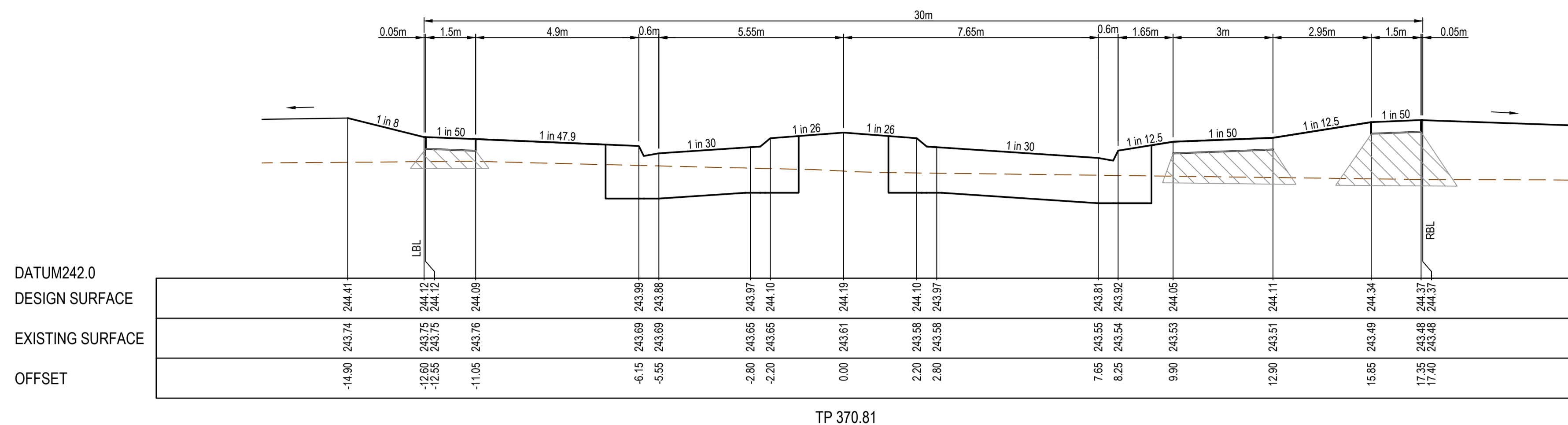
**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins Street  
 Melbourne, VIC 3008  
 Ph 03 9514 1500



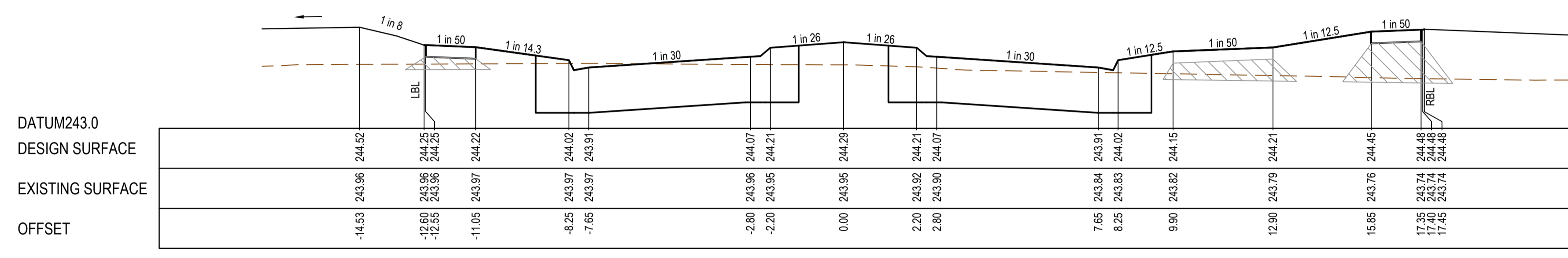
Olivine Estate - Stage 5B  
 Whittlesea City Council  
 Road and Drainage  
 Longitudinal Sections - 2

MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-05</b>	SHEET No. <b>05 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------

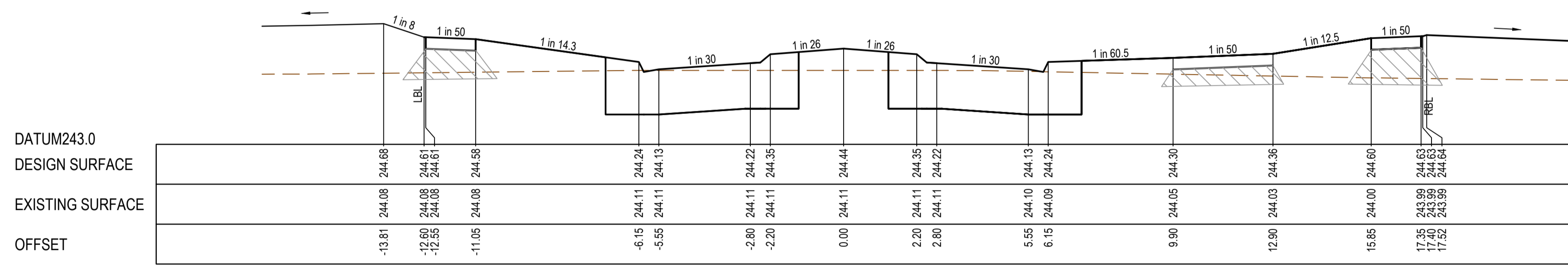
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



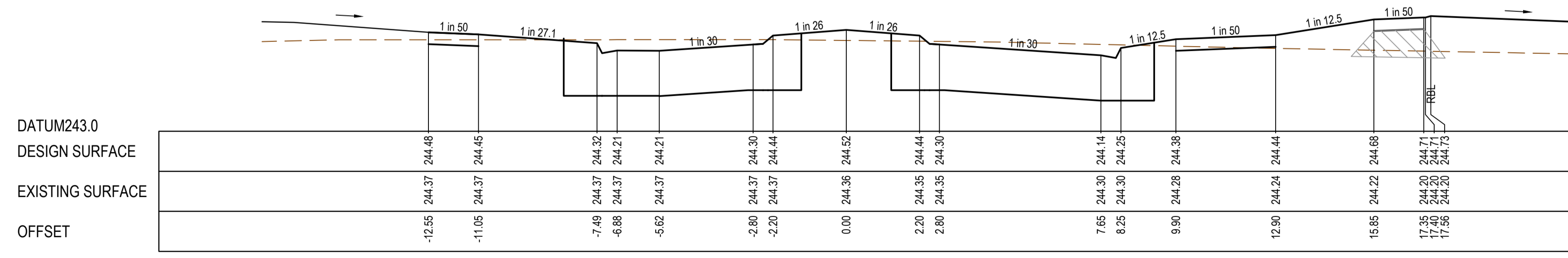
TP 370.81



CH 350.00



TP 320.55

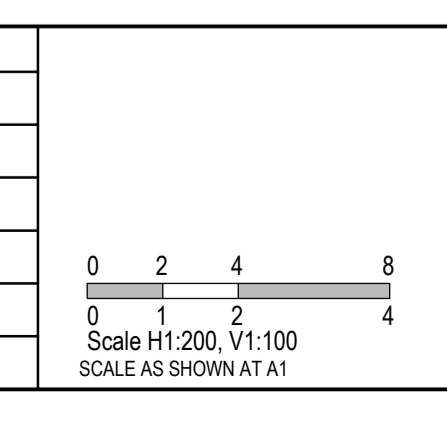


CH 304.25

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

**AS CONSTRUCTED**

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



**SMEC**  
Member of the Surlana Jurong Group  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins Street  
Melbourne, VIC 3008  
Ph 03 9514 1500

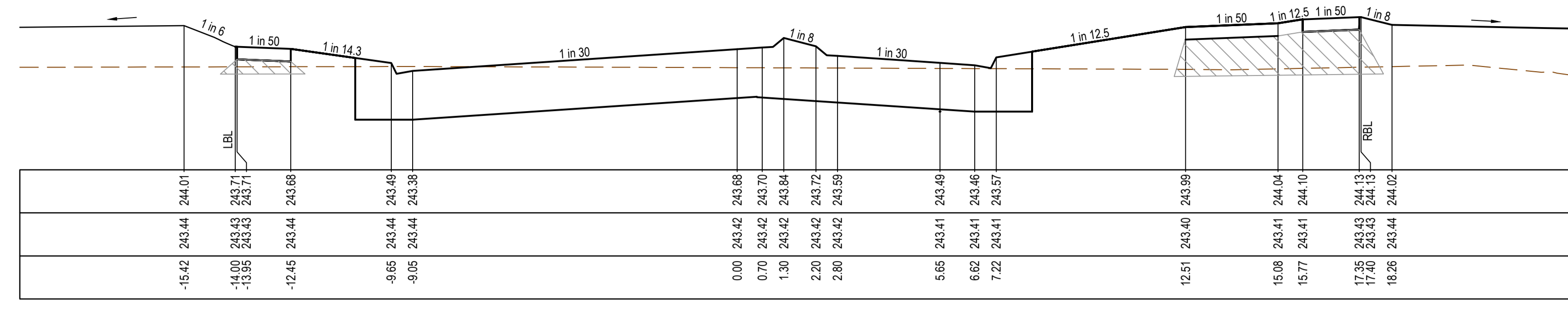
**mirvac**

Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Hayes Hill Boulevard  
Ch 304.25 - Ch 370.81

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
8M2	1700E-05B-06	06 of 20	1

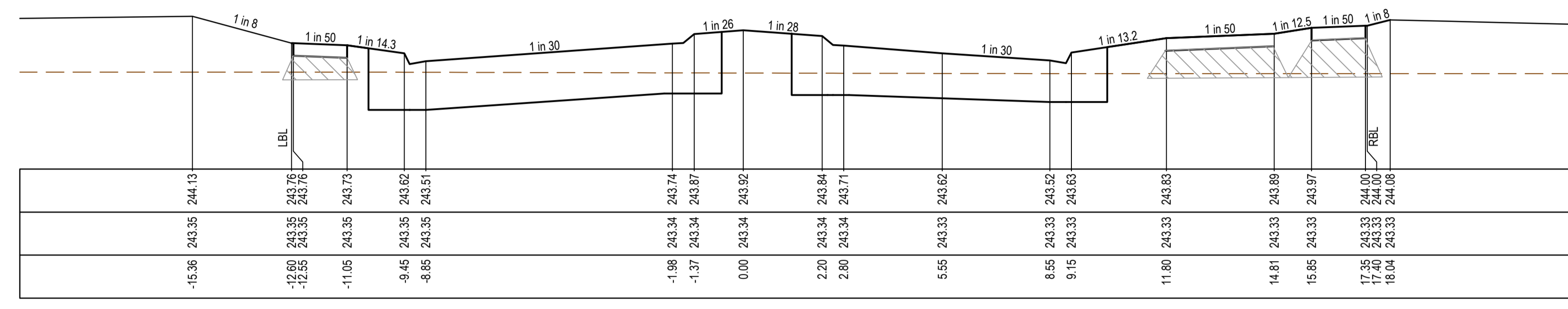
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE

DATUM242.0  
DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



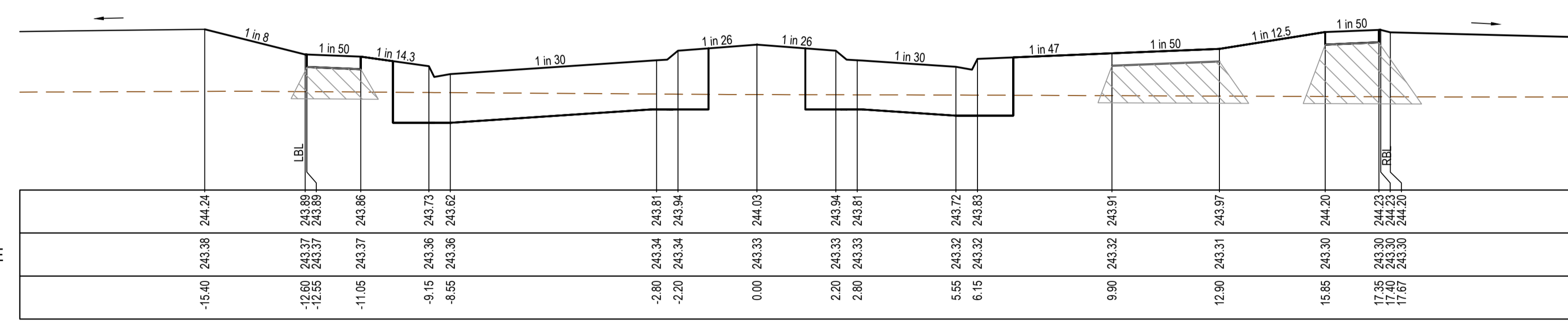
TP 448.32

DATUM242.0  
DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



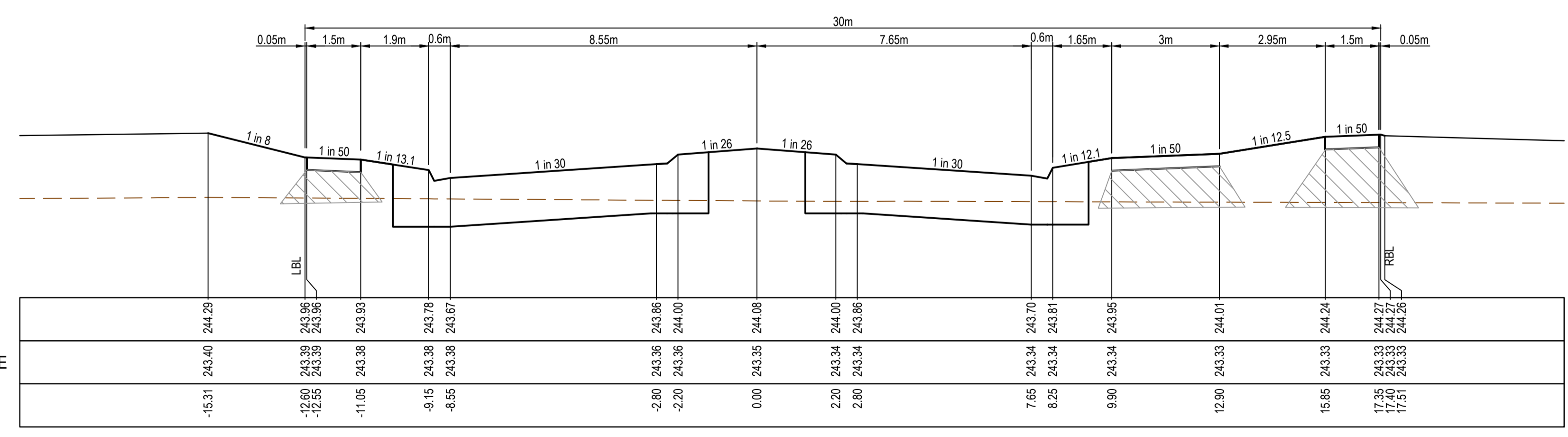
CH 424.05

DATUM242.0  
DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



TP 402.61

DATUM242.0  
DESIGN SURFACE  
EXISTING SURFACE  
OFFSET

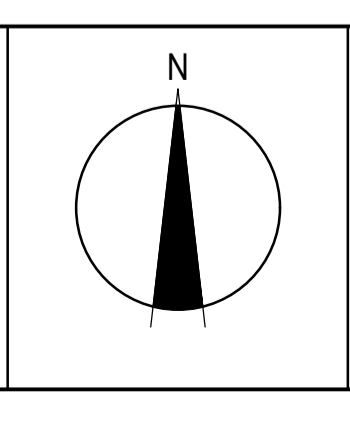


CH 392.25

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

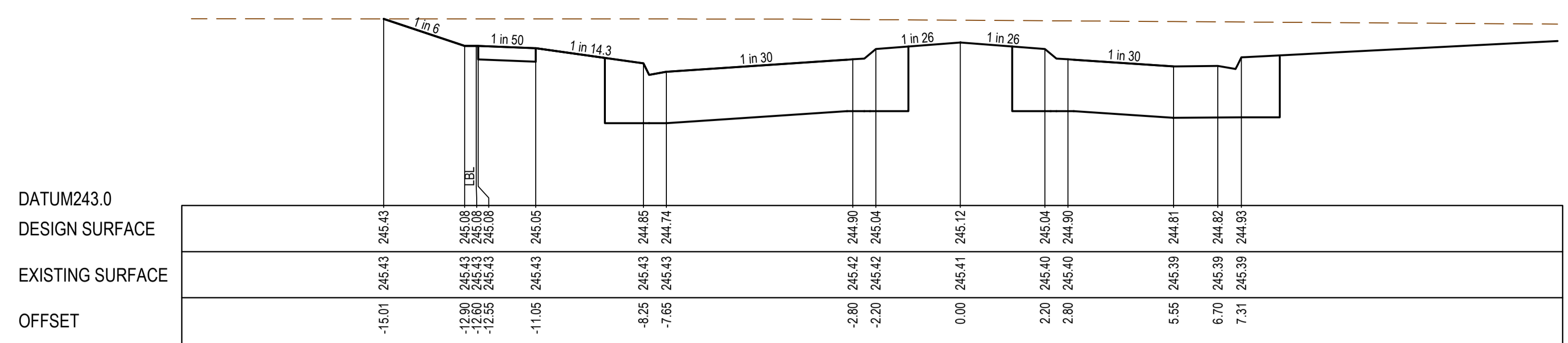


Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins Street  
 Melbourne, VIC 3008  
 Ph 03 9514 1500

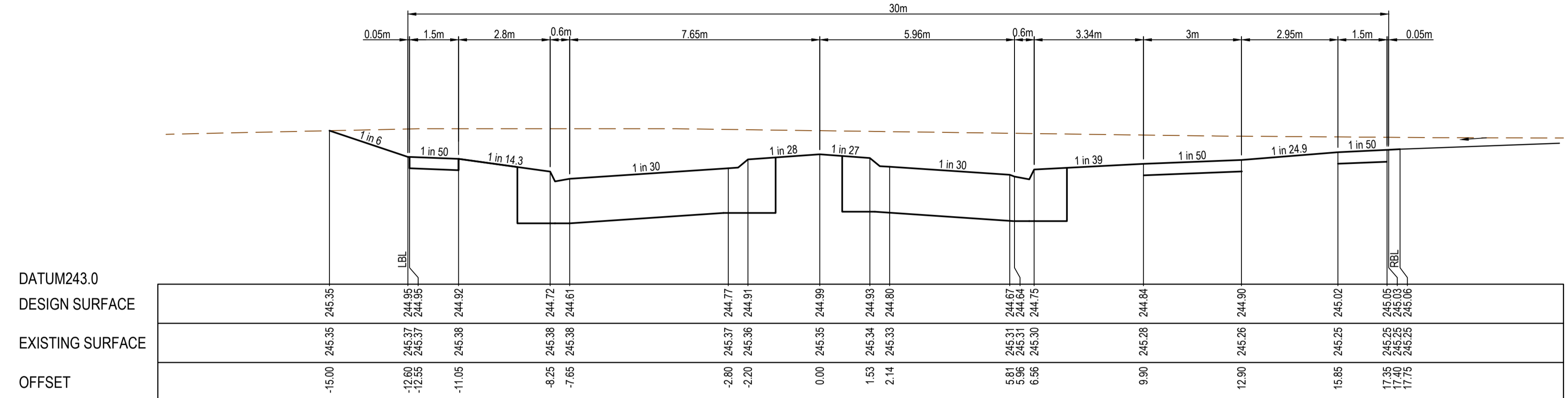
Olivine Estate - Stage 5B  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Hayes Hill Boulevard  
 Ch 392.25 - Ch 448.32

MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
8M2	1700E-05B-07	07 of 20	1

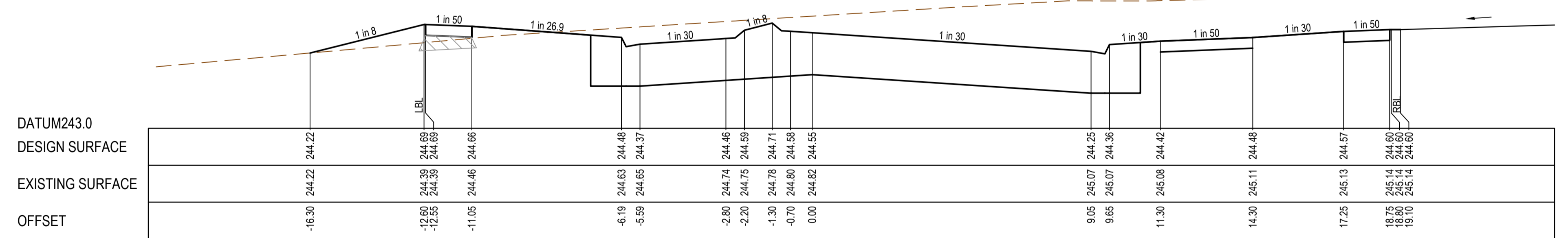
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



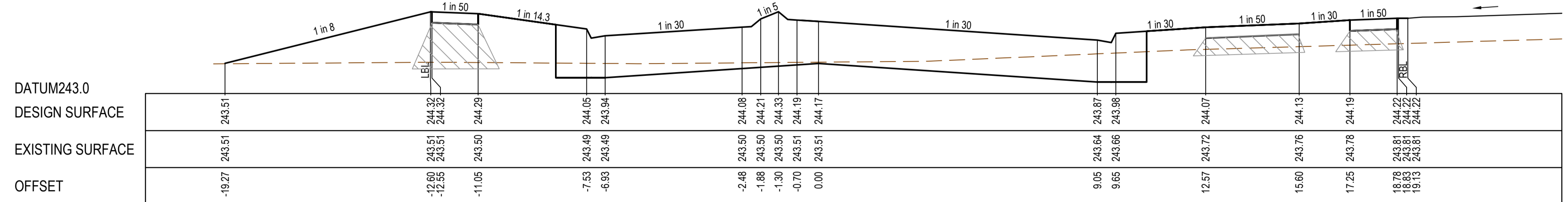
CH 539.97



CH 528.55



CH 510.73

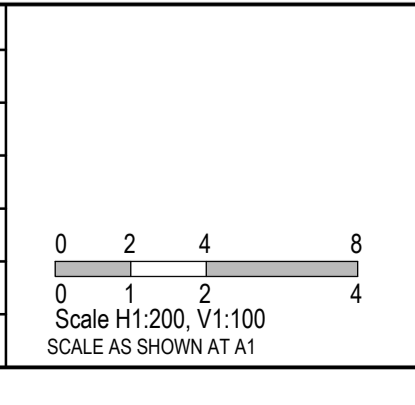


TP 491.20

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

**AS CONSTRUCTED**

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.		TITLE	NAME
DESIGNER	R.Barua	DRAFTER	S.MacLaren
CHECKED	Z.Gosev	AUTHORISED	A.Burrows
REFERENCE No. 1		REFERENCE No. 2	



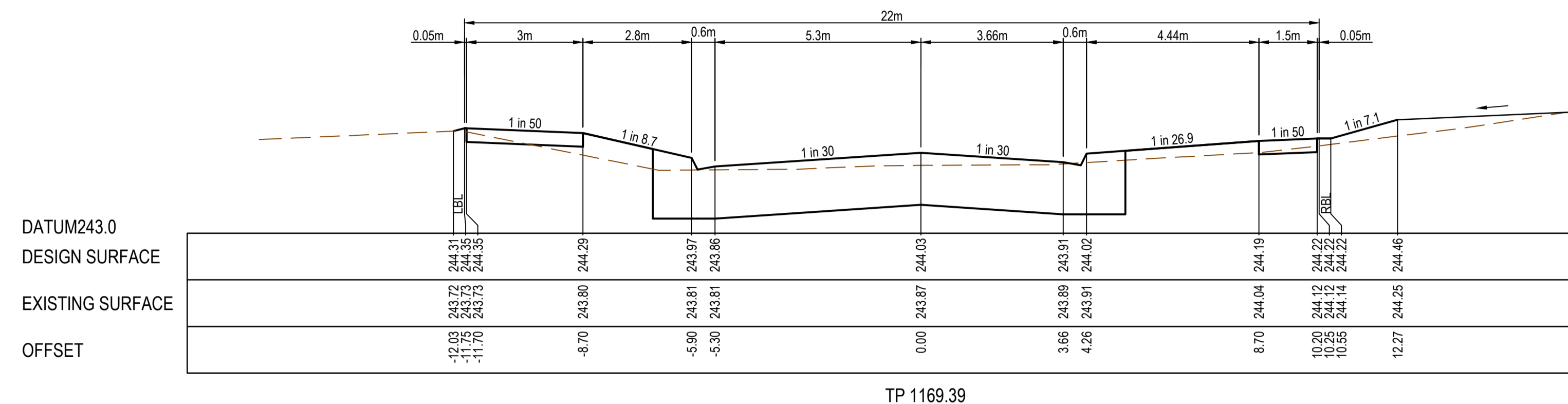
**SMEC**  
Member of the Surlana Jurong Group  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins Street  
Melbourne, VIC 3008  
Ph 03 9514 1500

Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Hayes Hill Boulevard  
Ch 491.20 - Ch 539.97

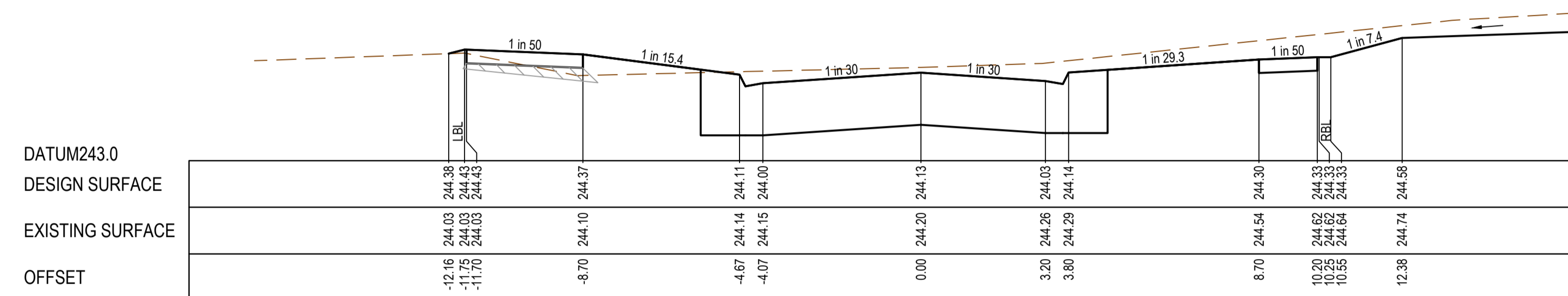
MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-08</b>	SHEET No. <b>08 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------



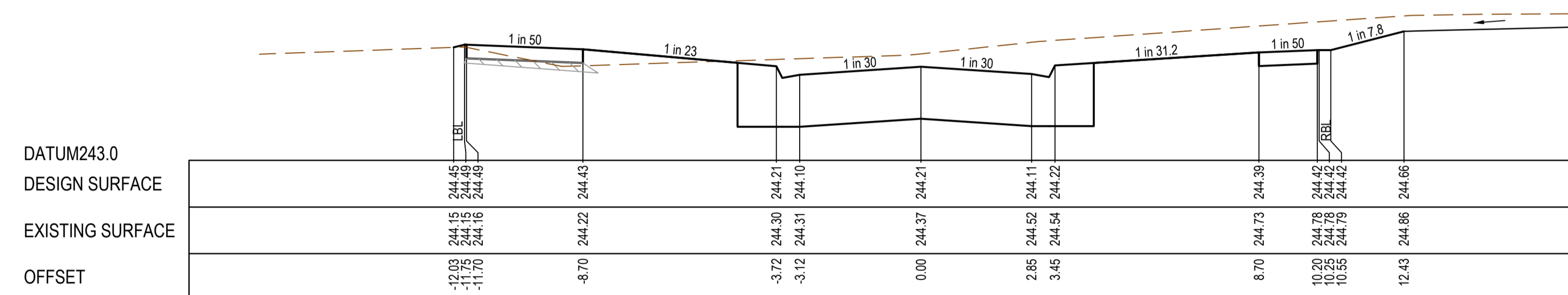
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



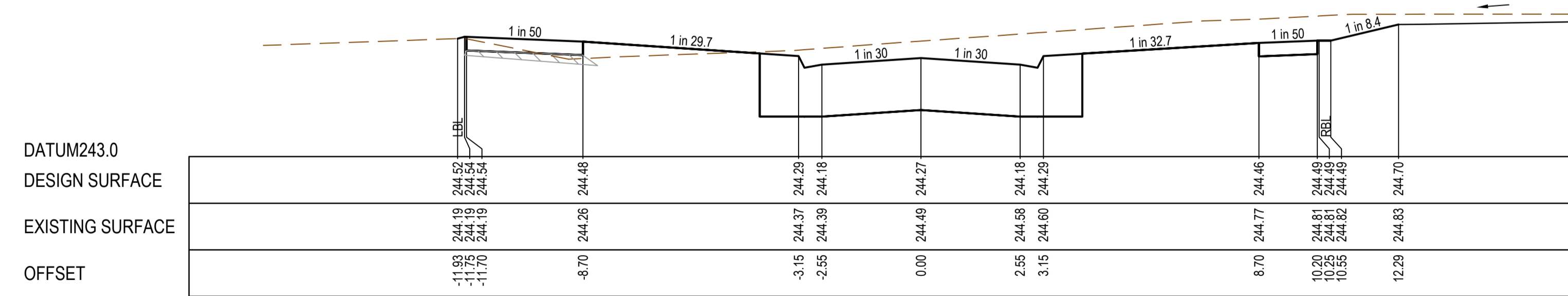
TP 1169.39



CH 1150.00



CH 1135.09

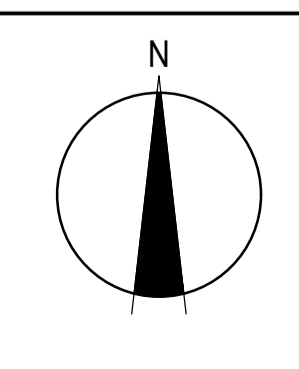
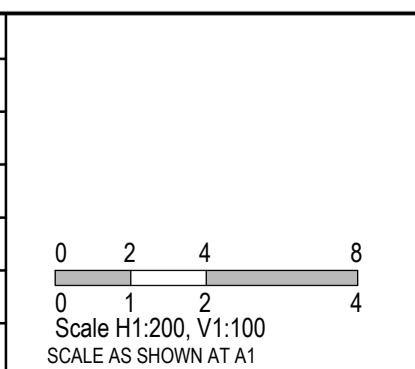


CH 1122.59

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

**AS CONSTRUCTED**

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.	
TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



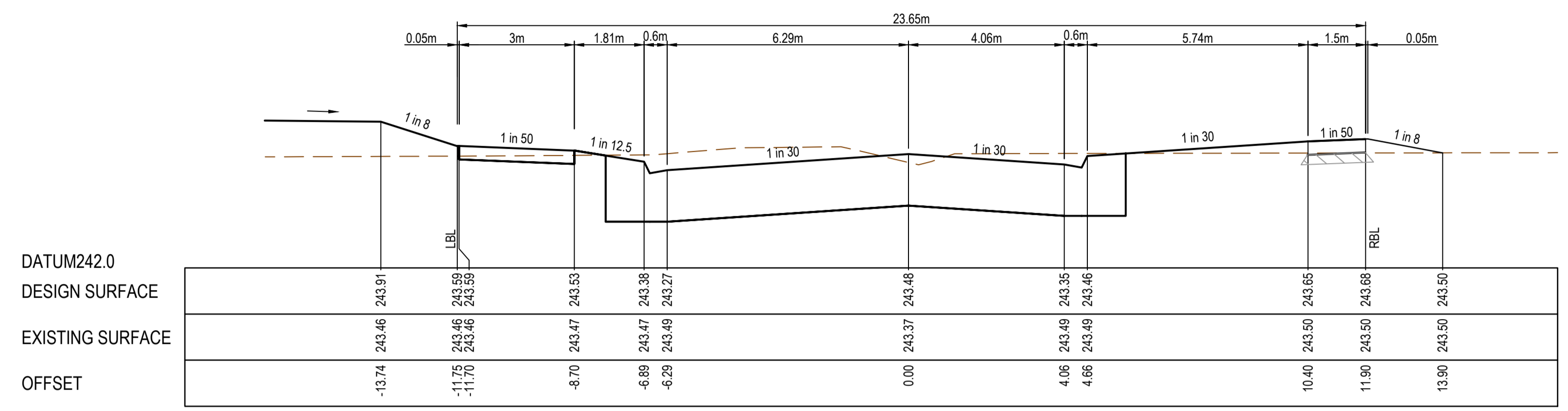
**SMEC**  
Member of the **Surbana Jurong Group**  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins Street  
Melbourne, VIC 3008  
Ph 03 9514 1500



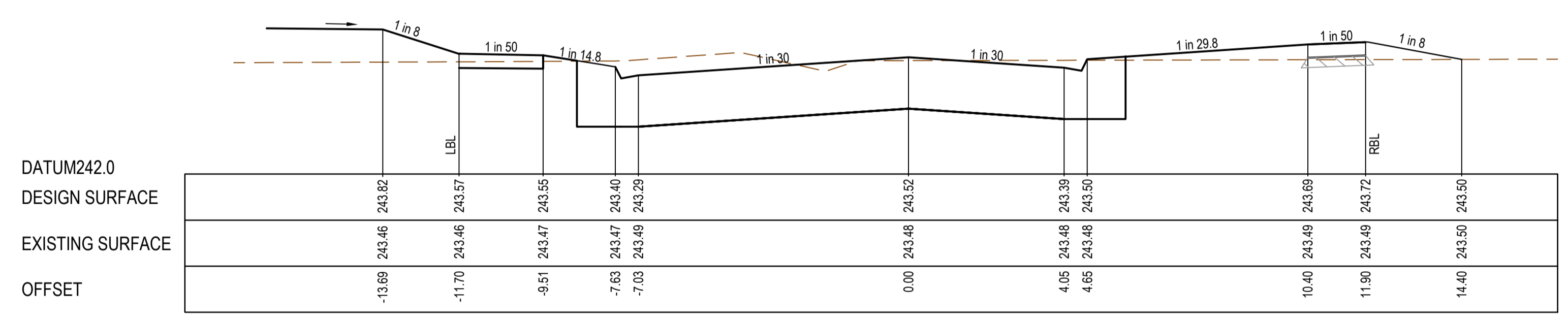
Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Olivine Boulevard  
Ch 1122.59 - Ch 1169.39

MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-09</b>	SHEET No. <b>09 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------

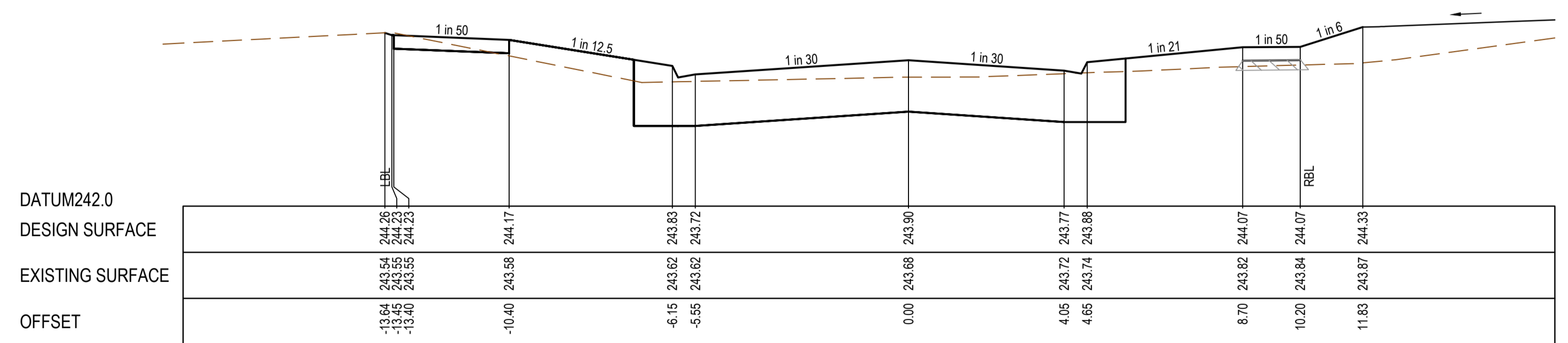
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



CH 1244.98



CH 1239.98



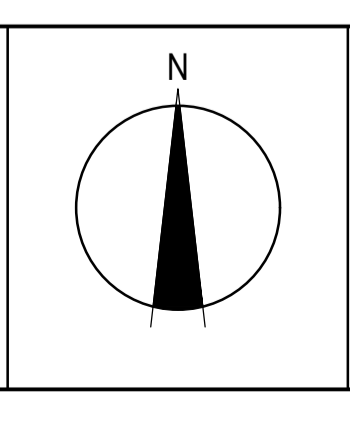
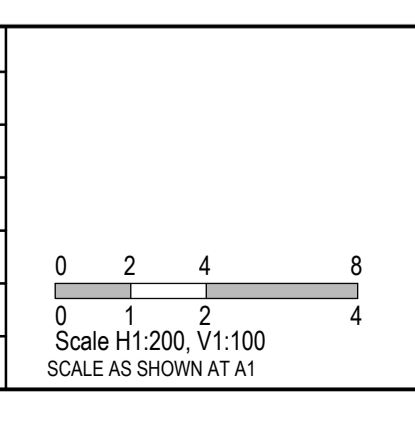
CH 1188.60

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

**AS CONSTRUCTED**

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

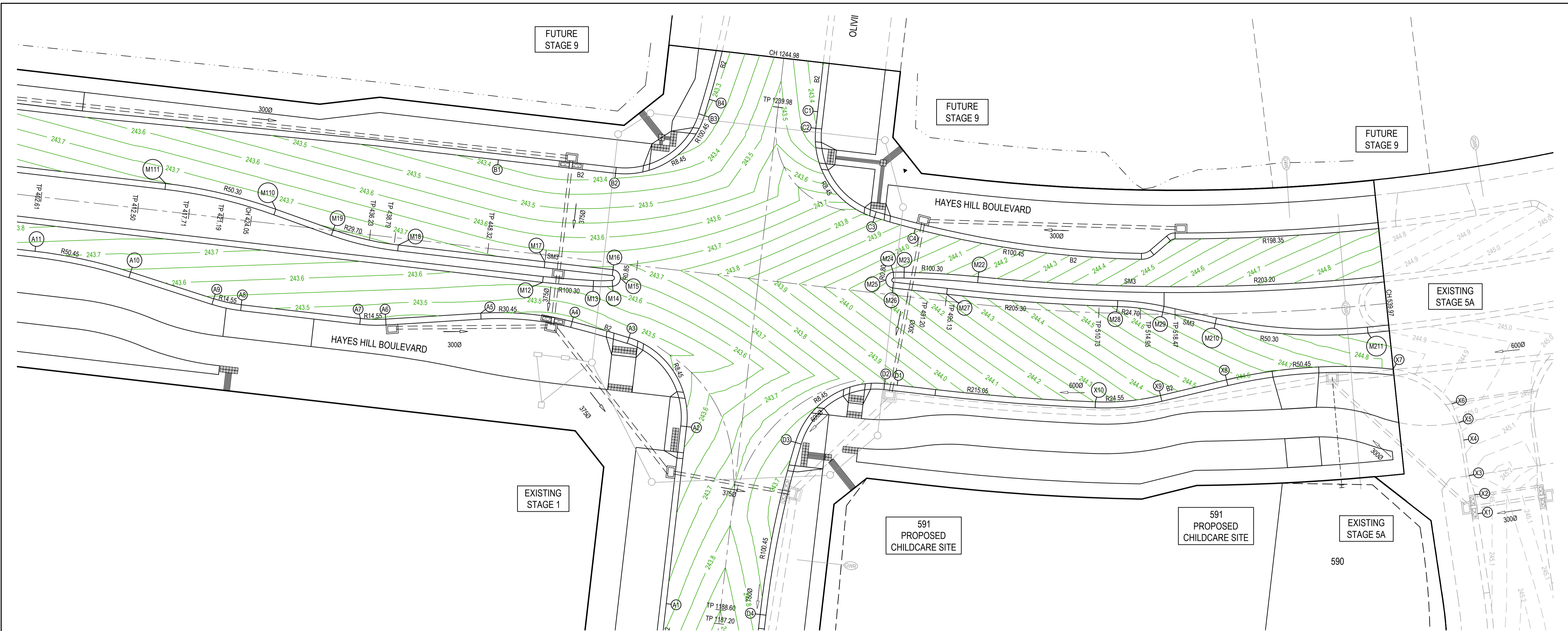
TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



Member of the **Surbana Jurong Group**  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins Street  
Melbourne, VIC 3008  
Ph 03 9514 1500

Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Olivine Boulevard  
Ch 1188.60 - Ch 1244.98

MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-10</b>	SHEET No. <b>10 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------



Alignment M1

Point no	Easting	Northing	RL
M12	323092.839	5843575.654	243.557
M13	323097.989	5843575.240	243.564
M14	323099.959	5843575.260	243.616
M15	323100.742	5843576.086	243.660
M16	323099.993	5843576.942	243.705
M17	323093.076	5843577.737	243.691
M18	323078.186	5843579.448	243.748
M19	323071.570	5843580.991	243.756
M110	323065.738	5843583.077	243.740
M111	323054.534	5843585.689	243.753

Curve no	I	Radius	Arc	A	B	X	Y	I	Mid point RL
M12 - M13	2.952	100.300	5.167	0.033	0.025	1.292	1.292	1.292	243.545
M13 - M14	7.383	15.300	1.972	0.032	0.024	0.493	0.492	0.493	243.586
M14 - M15	84.592	0.845	1.248	0.220	0.163	0.305	0.264	0.312	243.638
M15 - M16	84.592	0.845	1.248	0.220	0.163	0.305	0.264	0.312	243.683
M18 - M19	13.134	29.700	6.808	0.195	0.146	1.701	1.696	1.702	243.758
M110 - M111	13.134	50.299	11.530	0.330	0.247	2.881	2.872	2.883	243.735

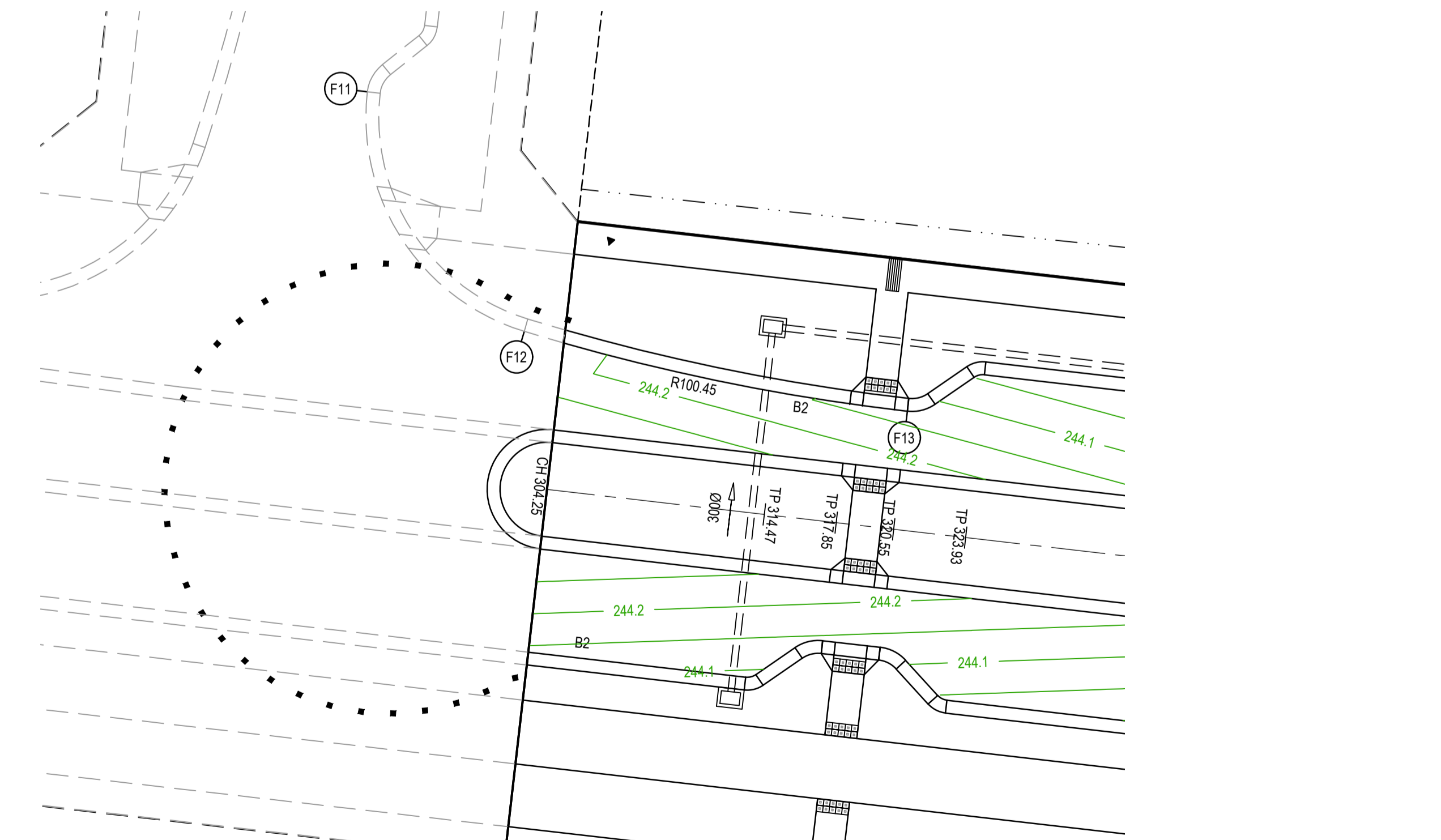
Alignment M2

Point no	Easting	Northing	RL
M22	323137.107	5843576.222	244.214
M23	323129.579	5843576.691	244.064
M24	323128.479	5843576.678	244.078
M25	323127.718	5843576.906	244.136
M26	323128.426	5843575.084	244.160
M27	323133.898	5843574.455	244.269
M28	323151.261	5843573.203	244.614
M29	323155.861	5843572.636	244.685
M210	323161.187	5843571.465	244.739
M211	323176.713	5843570.514	244.884

Curve no	I	Radius	Arc	A	B	X	Y	I	Mid point RL
M22 - M23	4.310	100.300	7.544	0.071	0.053	1.886	1.885	1.886	244.139
M23 - M24	4.120	15.300	1.100	0.010	0.007	0.275	0.275	0.275	244.053
M24 - M25	85.364	0.800	1.192	0.212	0.157	0.291	0.251	0.298	244.107
M25 - M26	85.364	0.800	1.192	0.212	0.157	0.291	0.251	0.298	244.148
M27 - M28	4.860	205.300	17.413	0.185	0.138	4.353	4.351	4.353	244.442
M28 - M29	10.768	24.700	4.642	0.109	0.082	1.160	1.158	1.161	244.653
M210 - M211	17.790	50.300	15.618	0.605	0.453	3.901	3.877	3.905	244.811

FOR INTERSECTION LIP PROFILE SEE DRAWING No 1700E-05B-12 & 1700E-05B-13



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	KM/KM	AB

**AS CONSTRUCTED**

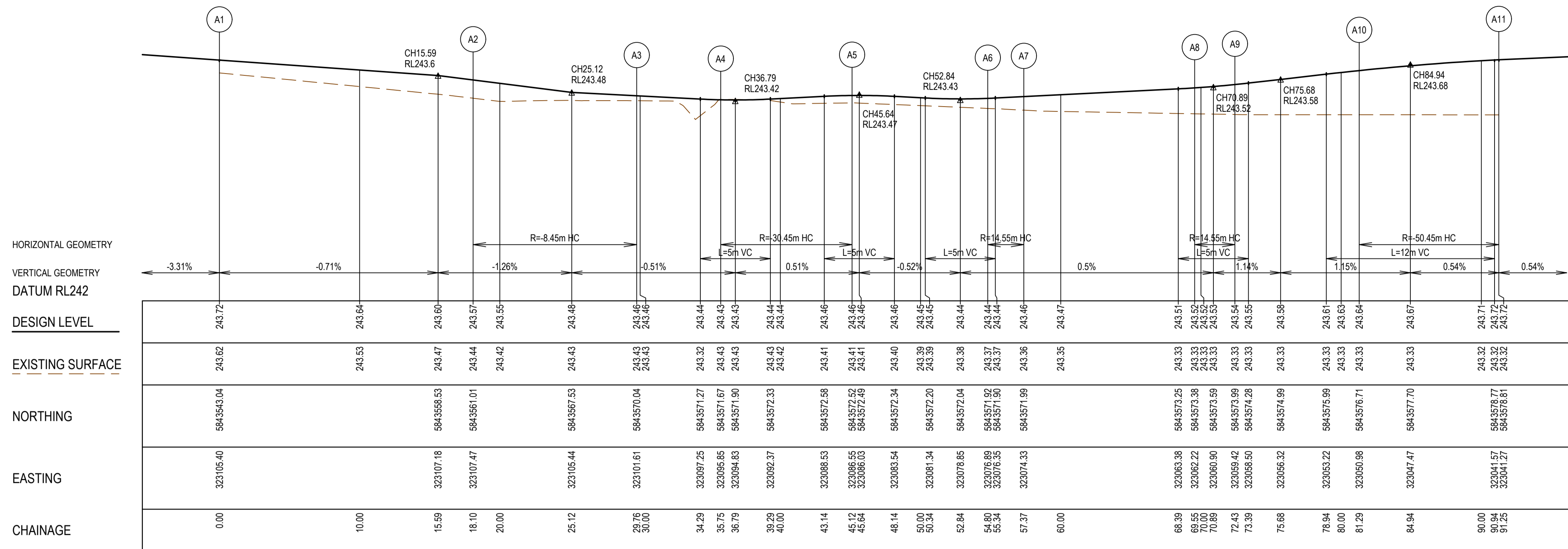
TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

Scale 1:200  
Scale AS SHOWN AT 1

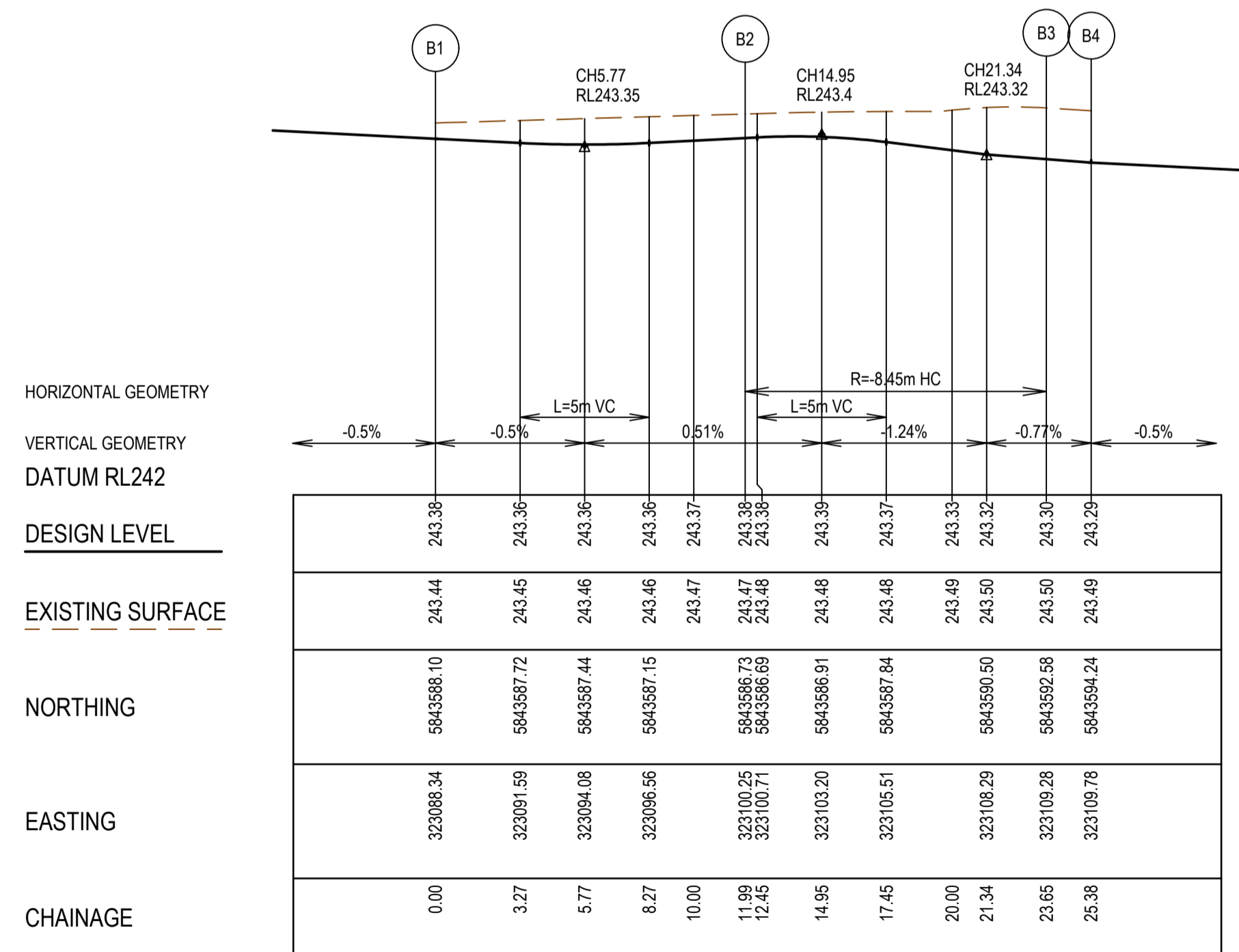
Member of the Surlana Jurong Group  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins Street  
Melbourne, VIC 3008  
Ph 03 9514 1500

Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Intersection Detail Plan &  
Lip Profiles - 1

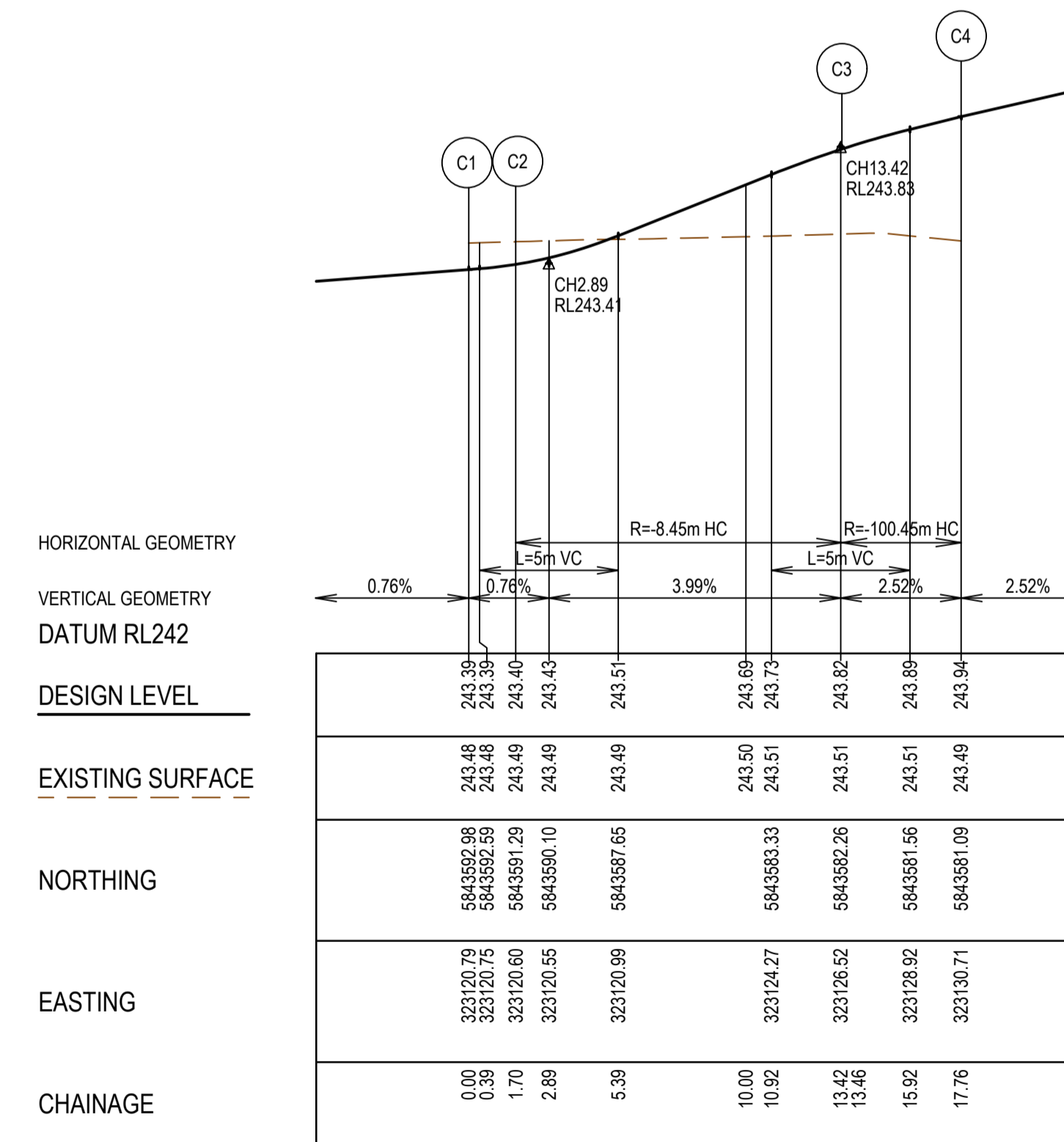
MELWAYS REF 8M2	PROJECT / DRAWING No 1700E-05B-11	SHEET No 11 of 20	REVISION 1
--------------------	--------------------------------------	----------------------	---------------



LIP LINE A



LIP LINE B

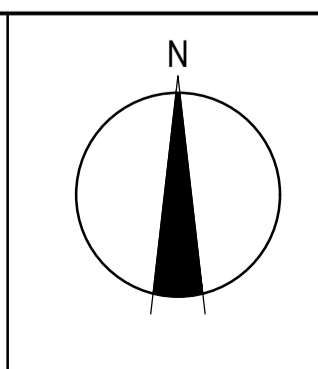
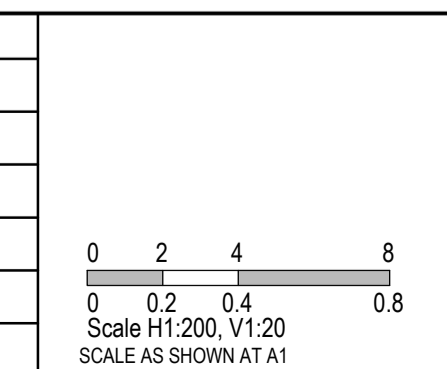


LIP LINE C

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

**AS CONSTRUCTED**

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

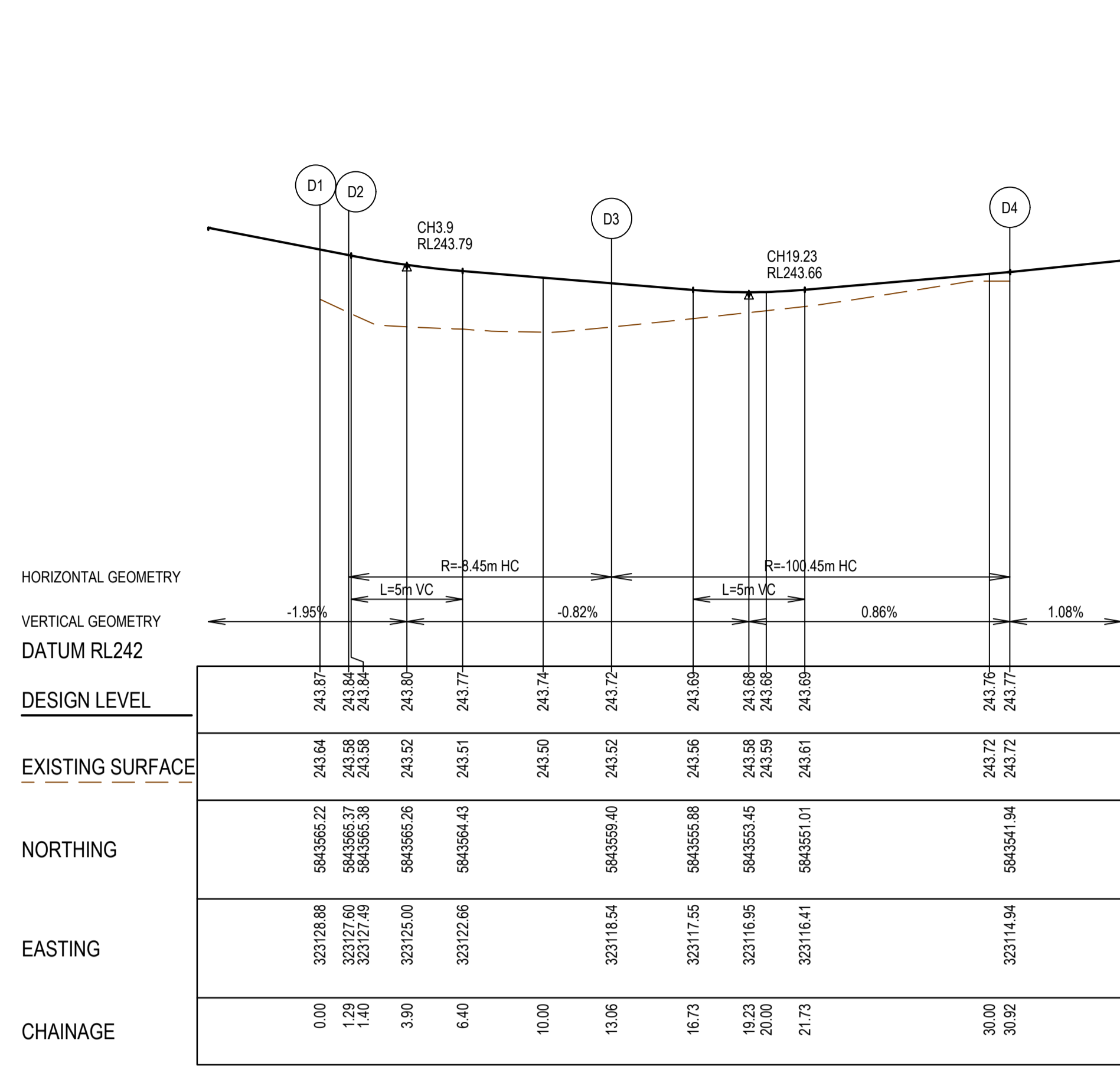


**SMEC**  
Member of the Surlana Jurong Group  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins Street  
Melbourne, VIC 3008  
Ph 03 9514 1500

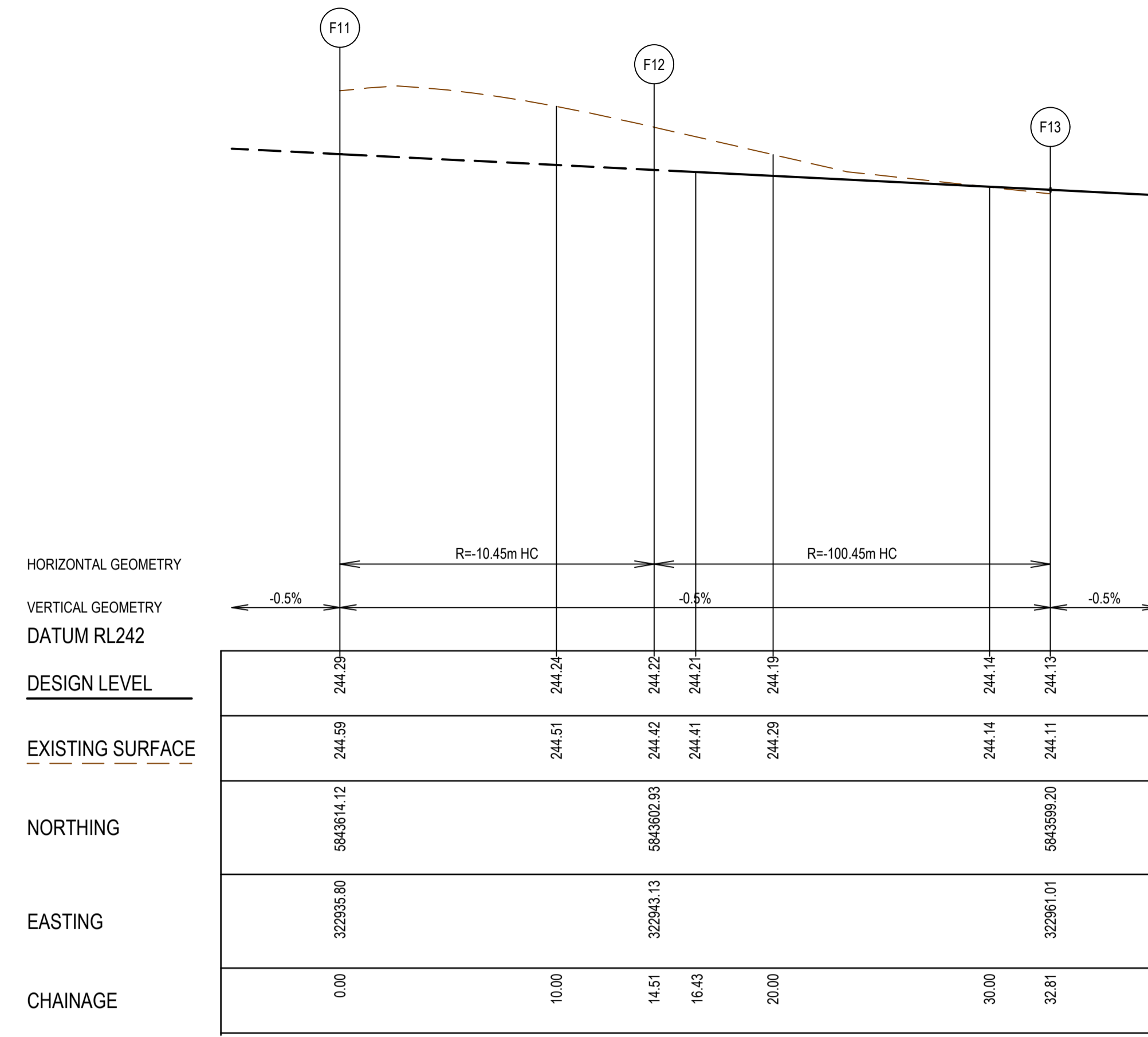
**mirvac**

Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Intersection Detail Plan &  
Lip Profiles - 2

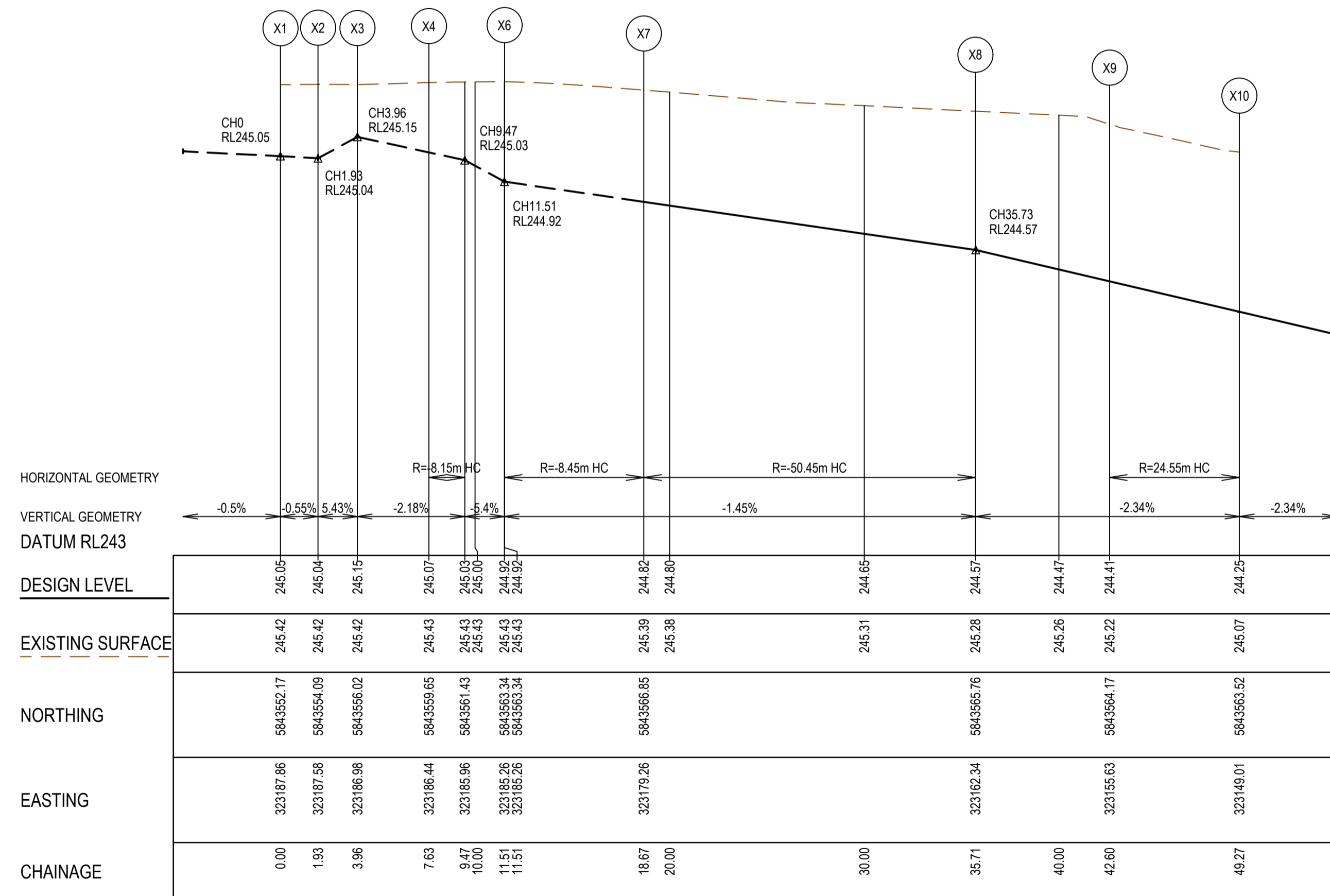
MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-12</b>	SHEET No. <b>12 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------



LIP LINE D



LIP LINE F1



LIP LINE X

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

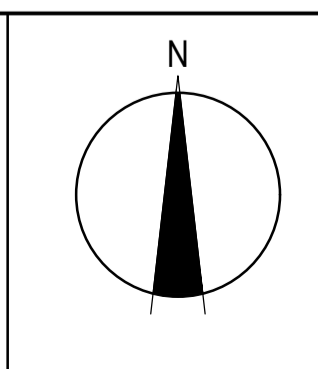
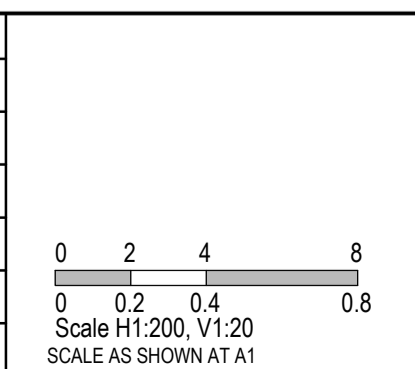
**AS CONSTRUCTED**

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

Quality Management - ISO 9001  
 OHS Management - AS/NZS 1801  
 Environmental Management - ISO 14001  
 Logo CO 100

Global-Mark.com.au®

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



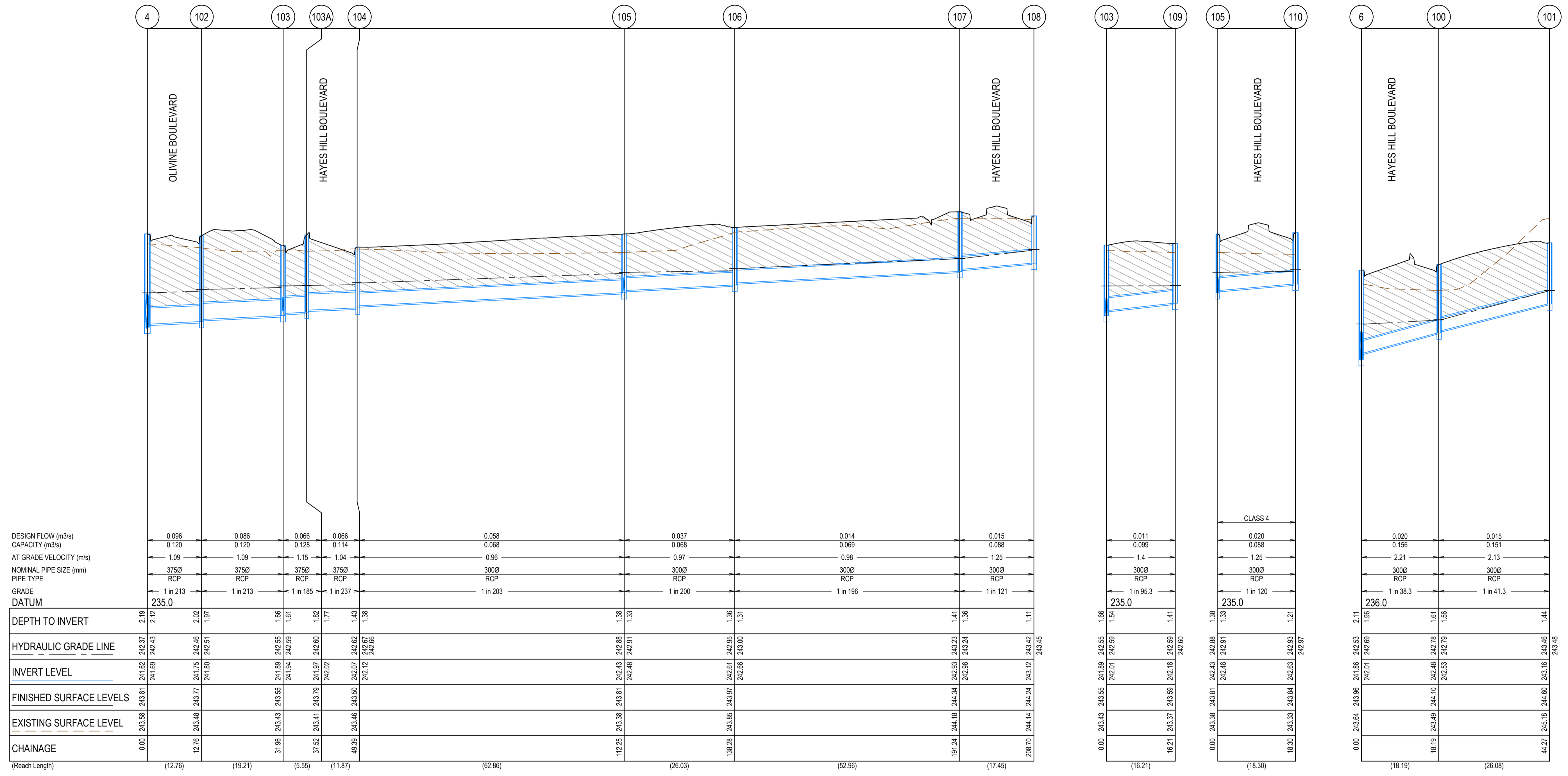
**SMEC**  
 Member of the **Surbana Jurong Group**  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins Street  
 Melbourne, VIC 3008  
 Ph 03 9514 1500



Olivine Estate - Stage 5B  
 Whittlesea City Council  
 Road and Drainage  
 Intersection Detail Plan &  
 Lip Profiles - 3

MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-13</b>	SHEET No. <b>13 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------

**CRUSHED ROCK BACKFILL**  
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



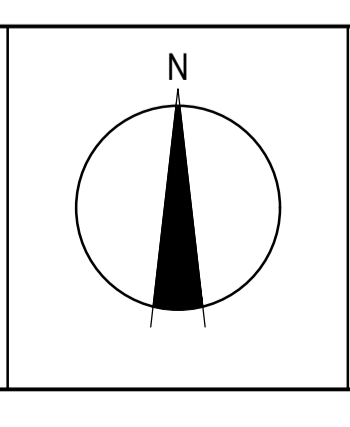
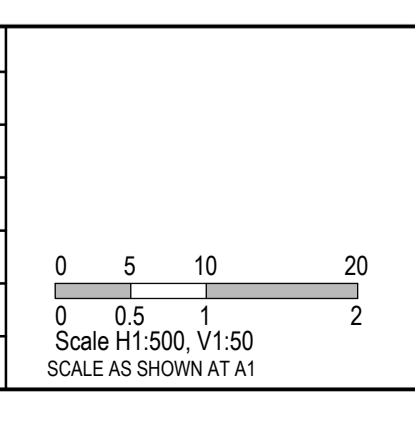
DESIGN FLOW (m3/s)	CAPACITY (m3/s)	AT GRADE VELOCITY (m/s)	NOMINAL PIPE SIZE (mm)	PIPE TYPE	GRADE DATUM	DEPTH TO INVERT	HYDRAULIC GRADE LINE	INVERT LEVEL	FINISHED SURFACE LEVELS	EXISTING SURFACE LEVEL	CHAINAGE (Reach Length)
0.096	0.120	1.09	3750	RCP	235.0	2.19	241.62	243.81	243.81	243.58	0.00
0.086	0.120	1.09	3750	RCP	235.0	2.12	241.69	243.77	243.77	243.48	12.76
0.066	0.128	1.15	3750	RCP	235.0	1.97	241.80	243.89	243.89	243.43	31.96
0.066	0.114	1.04	3750	RCP	235.0	1.61	241.94	243.94	243.94	243.55	37.52
0.058	0.068	0.96	3000	RCP	235.0	1.82	242.02	243.79	243.79	243.46	48.39
0.068	0.068	0.97	3000	RCP	235.0	1.77	242.07	243.81	243.81	243.38	112.25
0.037	0.068	0.97	3000	RCP	235.0	1.38	242.62	243.93	243.93	243.85	138.28
0.014	0.069	0.98	3000	RCP	235.0	1.31	242.71	244.03	244.03	244.18	191.24
0.015	0.088	1.25	3000	RCP	235.0	1.36	242.86	244.24	244.24	244.14	208.70

DESIGN FLOW (m3/s)	CAPACITY (m3/s)	AT GRADE VELOCITY (m/s)	NOMINAL PIPE SIZE (mm)	PIPE TYPE	GRADE DATUM	DEPTH TO INVERT	HYDRAULIC GRADE LINE	INVERT LEVEL	FINISHED SURFACE LEVELS	EXISTING SURFACE LEVEL	CHAINAGE (Reach Length)
0.011	0.099	1.4	3000	RCP	235.0	1.66	242.01	243.81	243.81	243.64	0.00
0.020	0.088	1.25	3000	RCP	235.0	1.54	242.09	243.81	243.81	243.49	18.19
0.015	0.088	1.25	3000	RCP	235.0	1.38	242.43	243.81	243.81	243.86	36.21
0.015	0.151	2.13	3000	RCP	236.0	1.33	242.91	244.10	244.10	244.03	44.27

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

**AS CONSTRUCTED**

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



**SMEC**  
 Member of the **Surbana Jurong Group**  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins Street  
 Melbourne, VIC 3008  
 Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 5B  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections

MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-14</b>	SHEET No. <b>14 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------

PIT NUMBER	TYPE	PIT SCHEDULE								STANDARD DRAWING	REMARKS
		INTERNAL		INLET		OUTLET		PIT SETOUT RL.	DEPTH		
		WIDTH (mm)	LENGTH (mm)	DIAMETER (mm)	INV R.L. (m)	DIAMETER (mm)	INV R.L. (m)				
4	EX. PIT	1050	900	600	241.70	750	241.62	243.81	2.19	EDCM 602 & 607	CONNECT TO EXISTING DOUBLE GRATED ENTRY PIT
				375	241.70						
6	EX. PIT	900	1050	600	241.91	600	241.86	243.96	2.11	EDCM 601 & 607	CONNECT TO EXISTING GRATED ENTRY PIT
				300	242.01						
100	GRATED ENTRY PIT	600	900	300	242.53	300	242.48	244.10	1.61	EDCM 601 & 605	
101	GRATED ENTRY PIT	600	900			300	243.16	244.60	1.44	EDCM 601 & 605	
102	GRATED ENTRY PIT	600	900	375	241.80	375	241.75	243.77	2.02	EDCM 601 & 607	INSTALL HD COVER
103	DOUBLE GRATED ENTRY PIT	750	900	375	241.94	375	241.89	243.55	1.66	EDCM 602 & 605	HAUNCH PIT. COVER 600x900
				300	242.01						
103a	JUNCTION PIT	600	600	375	242.02	375	241.97	243.79	1.82	EDCM 605	
104	DOUBLE GRATED ENTRY PIT	600	900	300	242.12	375	242.07	243.50	1.43	EDCM 602 & 605	
105	GRATED ENTRY PIT	600	900	300	242.48	300	242.43	243.81	1.38	EDCM 601 & 605	
				300	242.48						
106	GRATED ENTRY PIT	600	900	300	242.66	300	242.61	243.97	1.36	EDCM 601 & 605	
107	JUNCTION PIT	600	900	300	242.98	300	242.93	244.34	1.41	EDCM 605	
108	GRATED ENTRY PIT					300	243.12	244.24	1.11	EDCM 601 & 605	
109	GRATED ENTRY PIT					300	242.18	243.59	1.41	EDCM 601 & 605	
110	GRATED ENTRY PIT					300	242.63	243.84	1.21	EDCM 601 & 605	

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

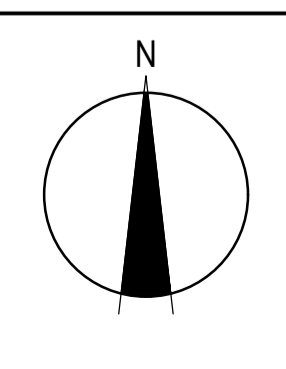
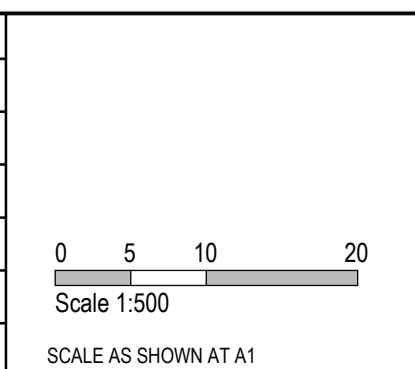

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.





Global-Mark.com.au®

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

Member of the **Surbana Jurong Group**  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins Street  
 Melbourne, VIC 3008  
 Ph 03 9514 1500

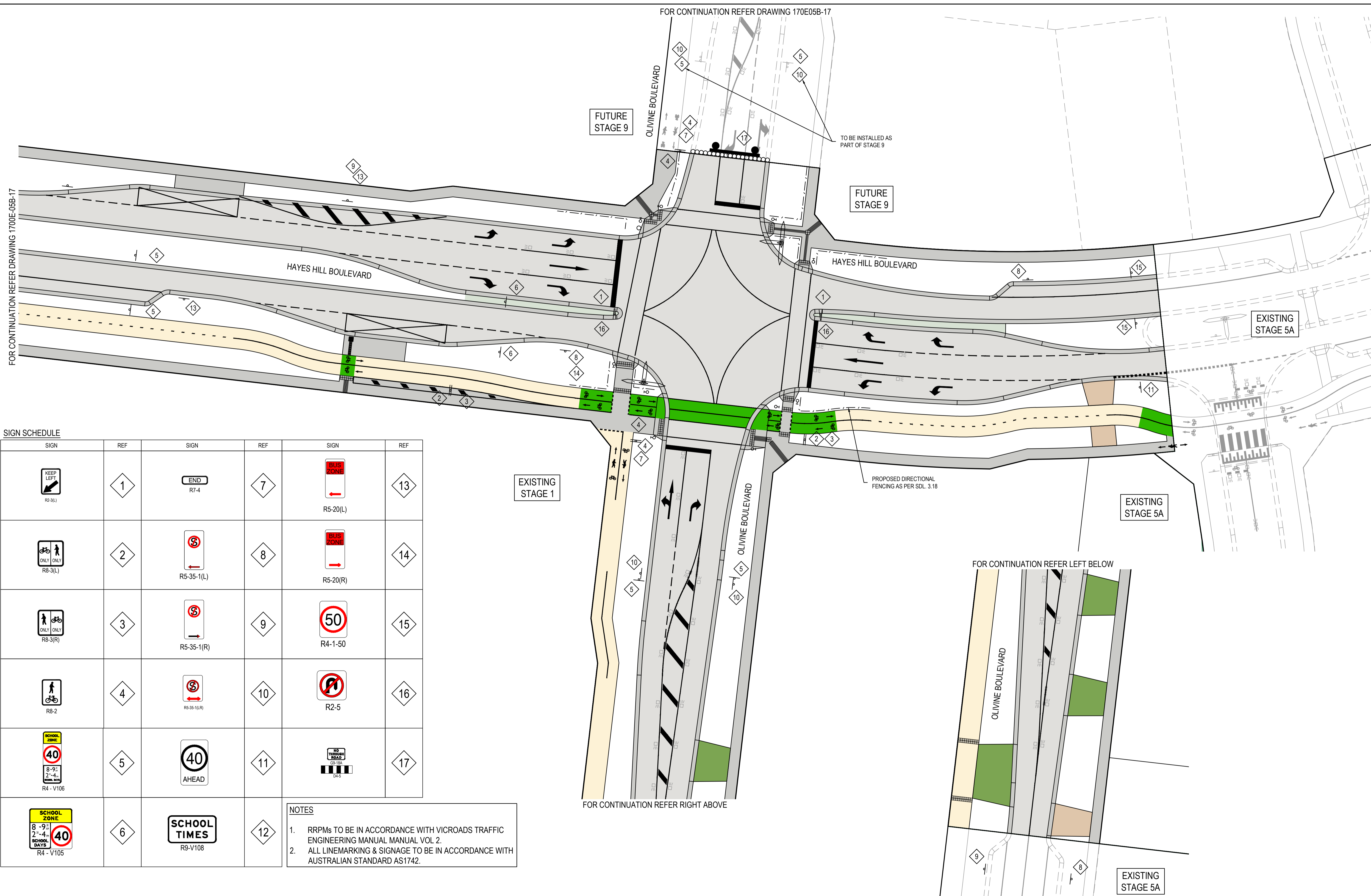


Olivine Estate - Stage 5B  
 Whittlesea City Council  
 Road and Drainage  
 Pit Schedule

MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-15</b>	SHEET No. <b>15 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------

FOR CONTINUATION REFER DRAWING 170E05B-17

FOR CONTINUATION REFER DRAWING 170E-05B-17



**SIGN SCHEDULE**

SIGN	REF	SIGN	REF	SIGN	REF
	1		7		13
	2		8		14
	3		9		15
	4		10		16
	5		11		17
	6		12		

- NOTES**
- RRPMs TO BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL MANUAL VOL 2.
  - ALL LINEMARKING & SIGNAGE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1742.

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	KMK/M	AB

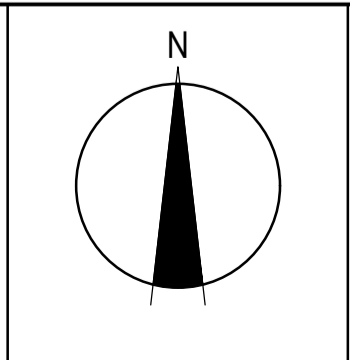
**AS CONSTRUCTED**

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

Quality Management - ISO 9001  
 OHS Management - AS/NZS 4801  
 Environmental Management - ISO 14001

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

0 5 10 20  
 Scale 1:500  
 SCALE AS SHOWN AT A1



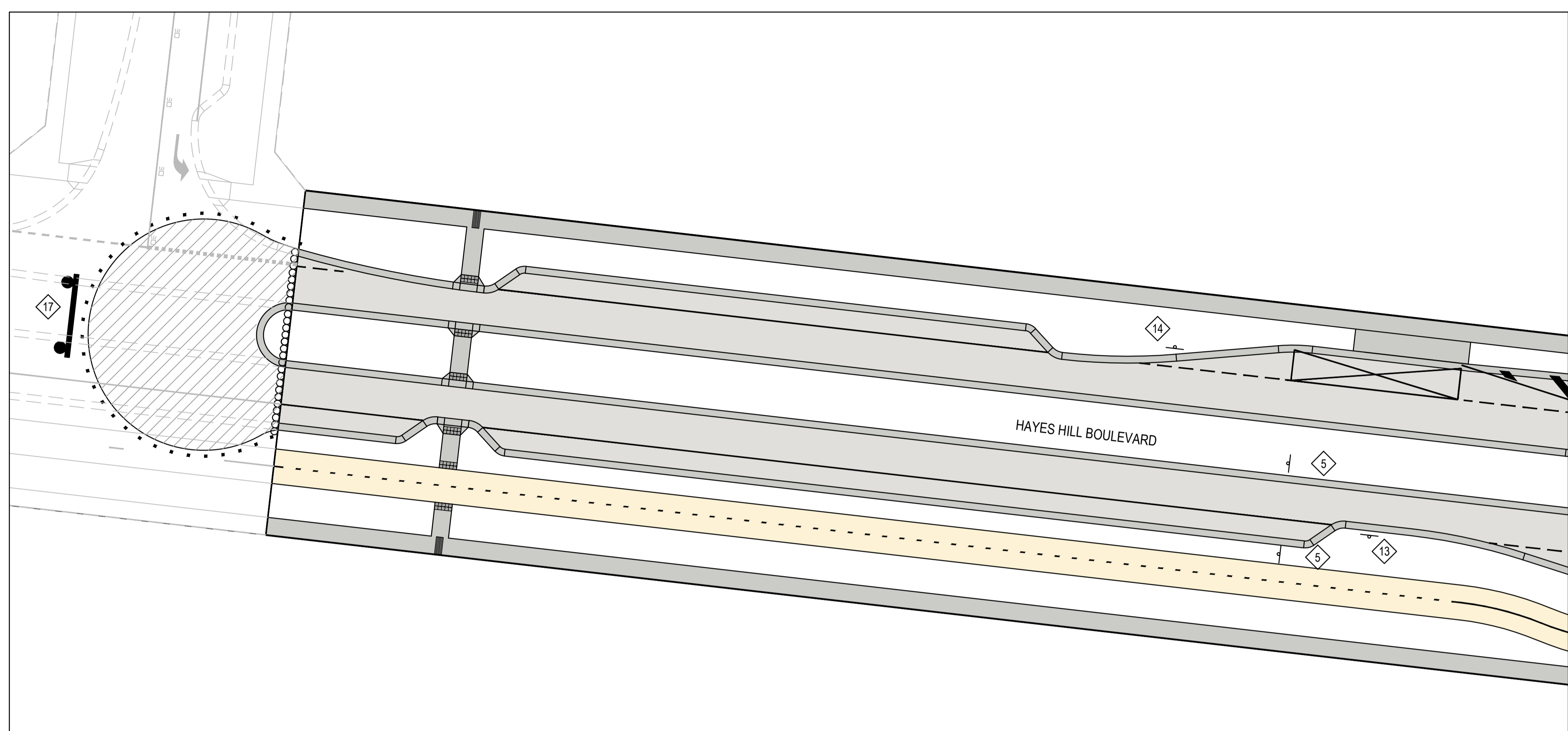
**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins Street  
 Melbourne, VIC 3008  
 Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 5B  
 Whittlesea City Council  
 Road and Drainage  
 Signs & Linemarking Plan - 1

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-05B-16	SHEET No. 16 of 20	REVISION 1
--------------------	---------------------------------------	-----------------------	---------------



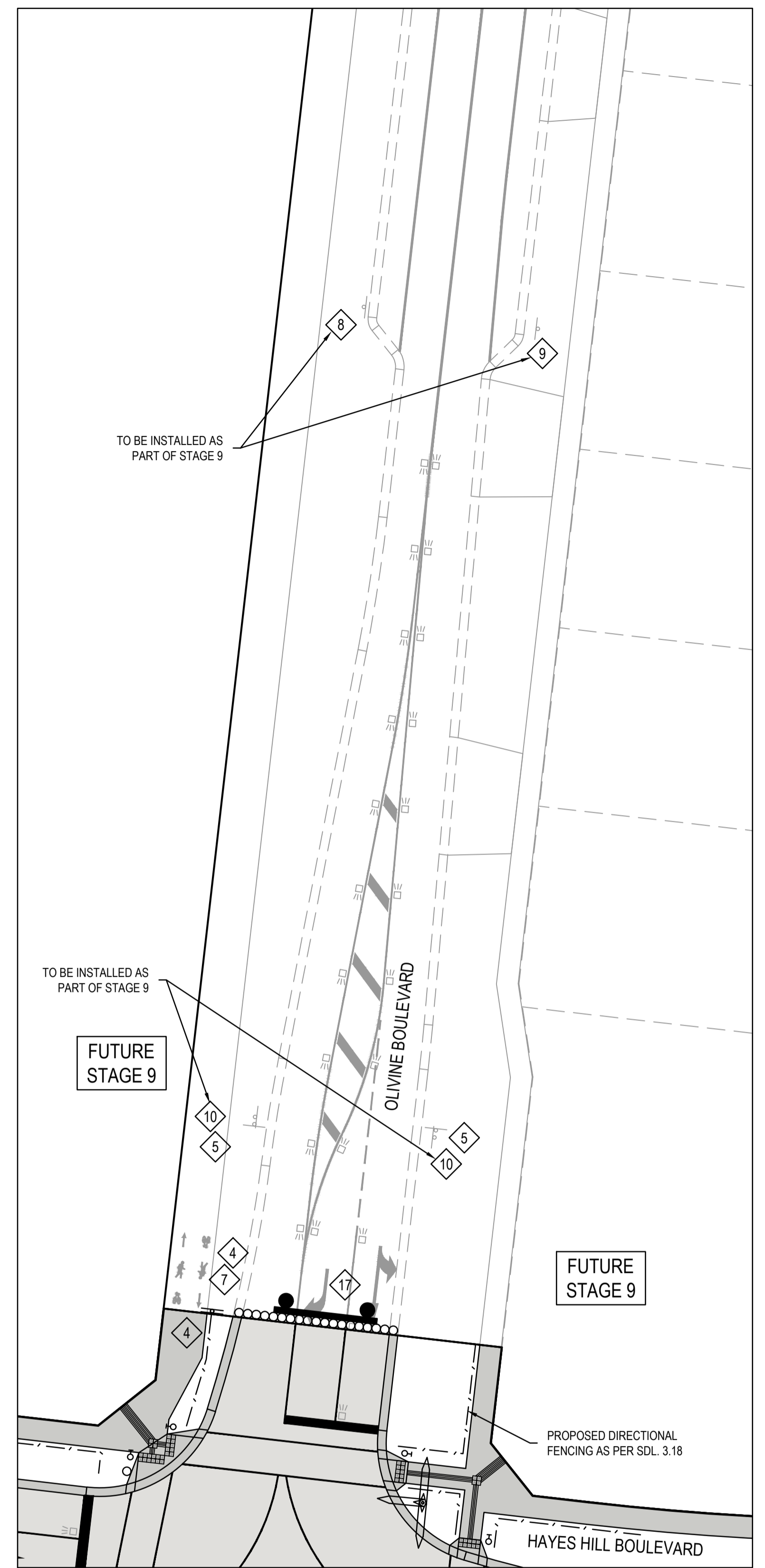


**SIGN SCHEDULE**

SIGN	REF	SIGN	REF	SIGN	REF
	1		7		13
	2		8		14
	3		9		15
	4		10		16
	5		11		17
	6		12		

**NOTES**

- RRPMs to BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL VOL 2.
- ALL LINEMARKING & SIGNAGE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1742.



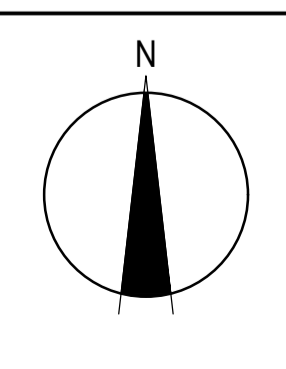
REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	KMKM	AB

**AS CONSTRUCTED**

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

0 5 10 20  
Scale 1:500  
SCALE AS SHOWN AT A1



**SMEC**  
Member of the Surlana Jurong Group  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins Street  
Melbourne, VIC 3008  
Ph 03 9514 1500

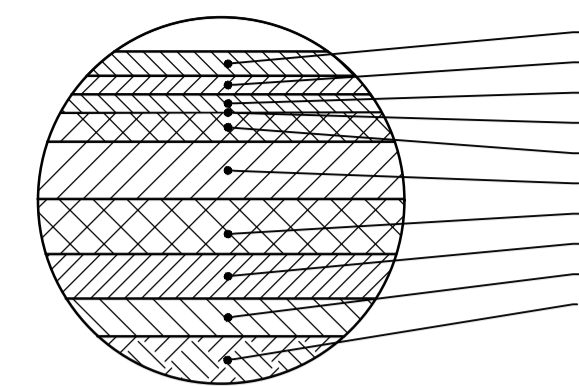
**mirvac**

Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Signs & Linemarking Plan - 2

MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-17</b>	SHEET No. <b>17 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------

OLIVINE BOULEVARD  
PAVEMENT COMPOSITION

670mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	40	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
B INTERMEDIATE COURSE 1	40	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
C INTERMEDIATE COURSE 2	-	-
D SAMII SEAL	10	SIZE 10 S18RF
E PRIME	-	-
F BASE COURSE	110	SIZE 20 CLASS 2 CRUSHED ROCK, COMPACTED TO A MINIMUM DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
G UPPER BASE COURSE	70	CLASS 3 CRUSHED ROCK COMPACTED TO A MINIMUM DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
H LOWER SUBBASE	100	CLASS 4 CRUSHED ROCK COMPACTED TO A MINIMUM DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1. THE LOWER SUBBASE LAYER MAY BE ELIMINATED AND REPLACED WITH A SINGLE UPPER SUBBASE LAYER 170mm IN THICKNESS
I CAPPING LAYER	300	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-9</sup> m/s. OR LIME STABILISED SITE WON CLAY WHICH CONFORMS TO THE PARAMETERS ABOVE.
J SUBGRADE	-	CBR 1.5% EXPANSIVE



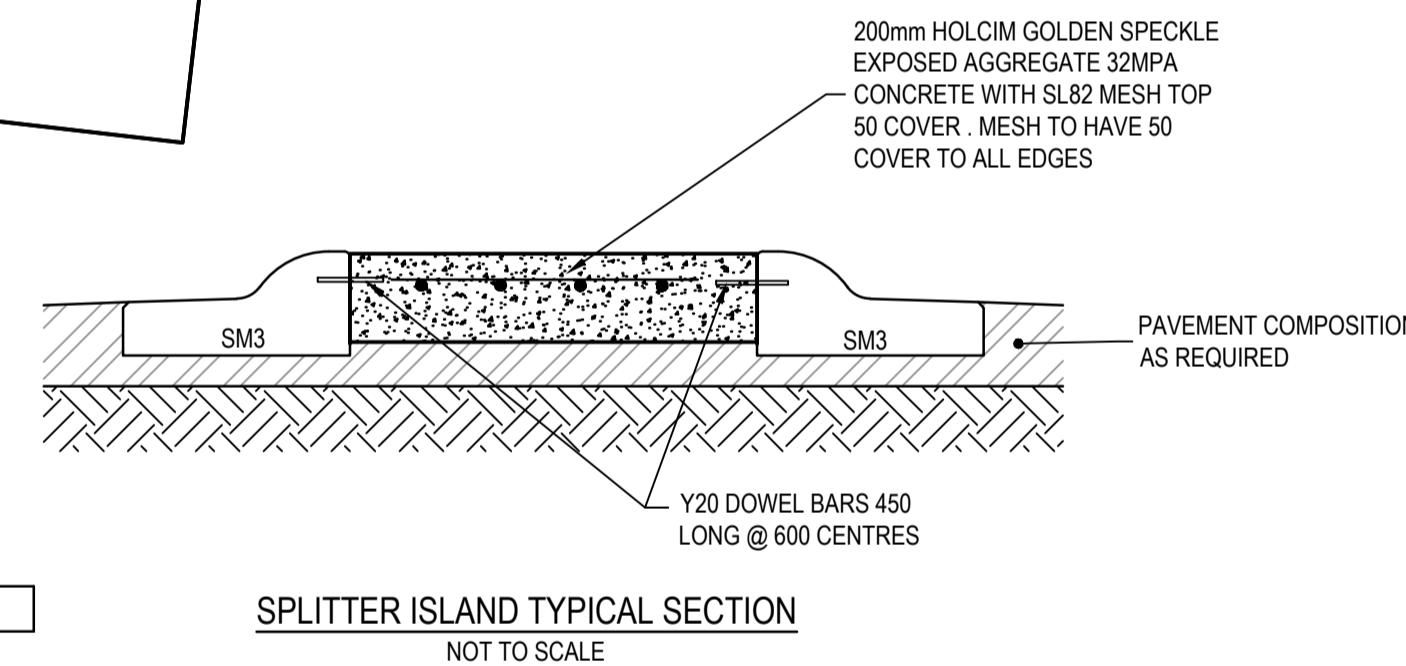
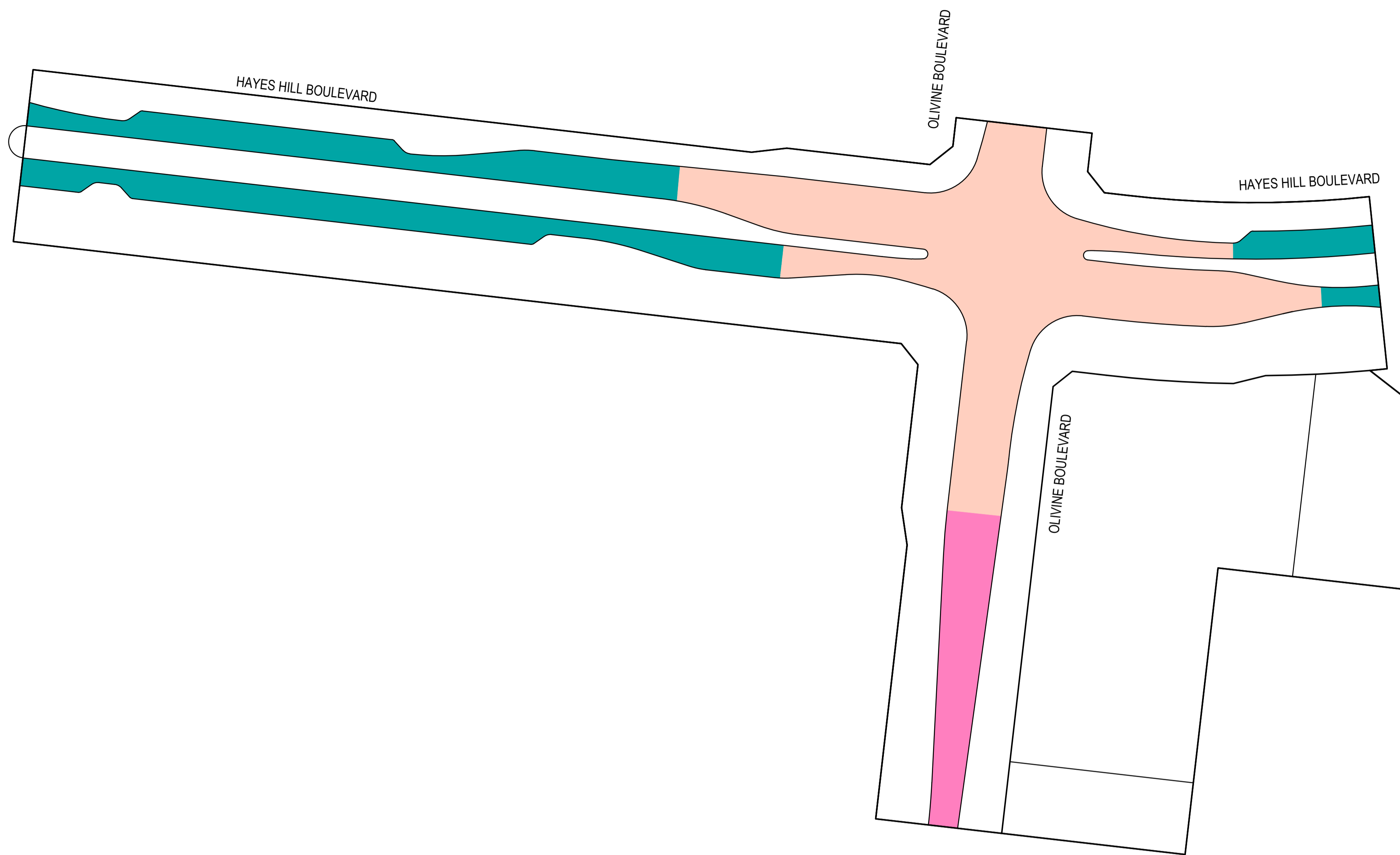
PAVEMENT COMPOSITION  
KEY DIAGRAM

HAYES HILL BOULEVARD (OUTSIDE OF SIGNALISED INTERSECTION)  
PAVEMENT COMPOSITION

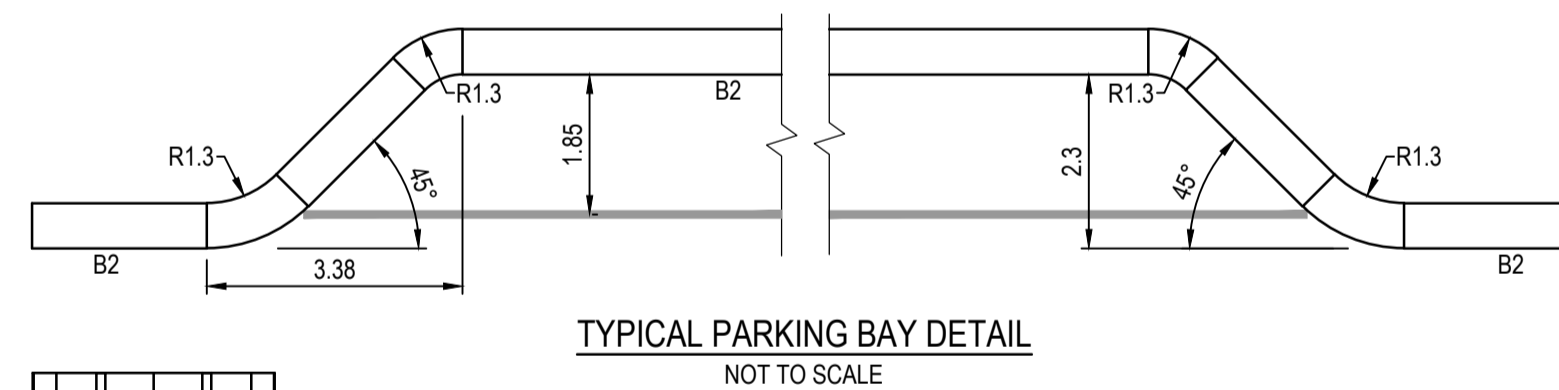
675mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	40	SIZE 14 TYPE H ASPHALT (CLASS 320 BINDER)
B INTERMEDIATE COURSE 1	80	SIZE 20 TYPE SI ASPHALT (CLASS 320 BINDER)
C INTERMEDIATE COURSE 2	75	SIZE 20 TYPE SI ASPHALT (CLASS 320 BINDER)
D SAMII SEAL	-	-
E PRIME	-	-
F BASE COURSE	180	SIZE 20 CLASS 3 2% CEMENT TREATED CRUSHED ROCK COMPACTED TO A MINIMUM 98% MODIFIED DRY DENSITY RATIO AND WITHIN ±2% OF MODIFIED OPTIMUM MOISTURE CONTENT. MINIMUM YOUNG'S MODULUS OF 500 MPA.
G UPPER BASE COURSE	-	-
H LOWER BASE	150	CLASS 4 CRUSHED ROCK COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
I CAPPING LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-9</sup> m/s. OR LIME STABILISED SITE WON CLAY WHICH CONFORMS TO THE PARAMETERS ABOVE.
J SUBGRADE	-	SUBGRADE CLAY AS FOUND (C.B.R = 2%) (IF REQUIRED, SUBGRADE IMPROVEMENT WORKS TO BE UNDERTAKEN TO COUNCIL'S SATISFACTION)

HAYES HILL BOULEVARD (SIGNALISED INTERSECTION)  
PAVEMENT COMPOSITION

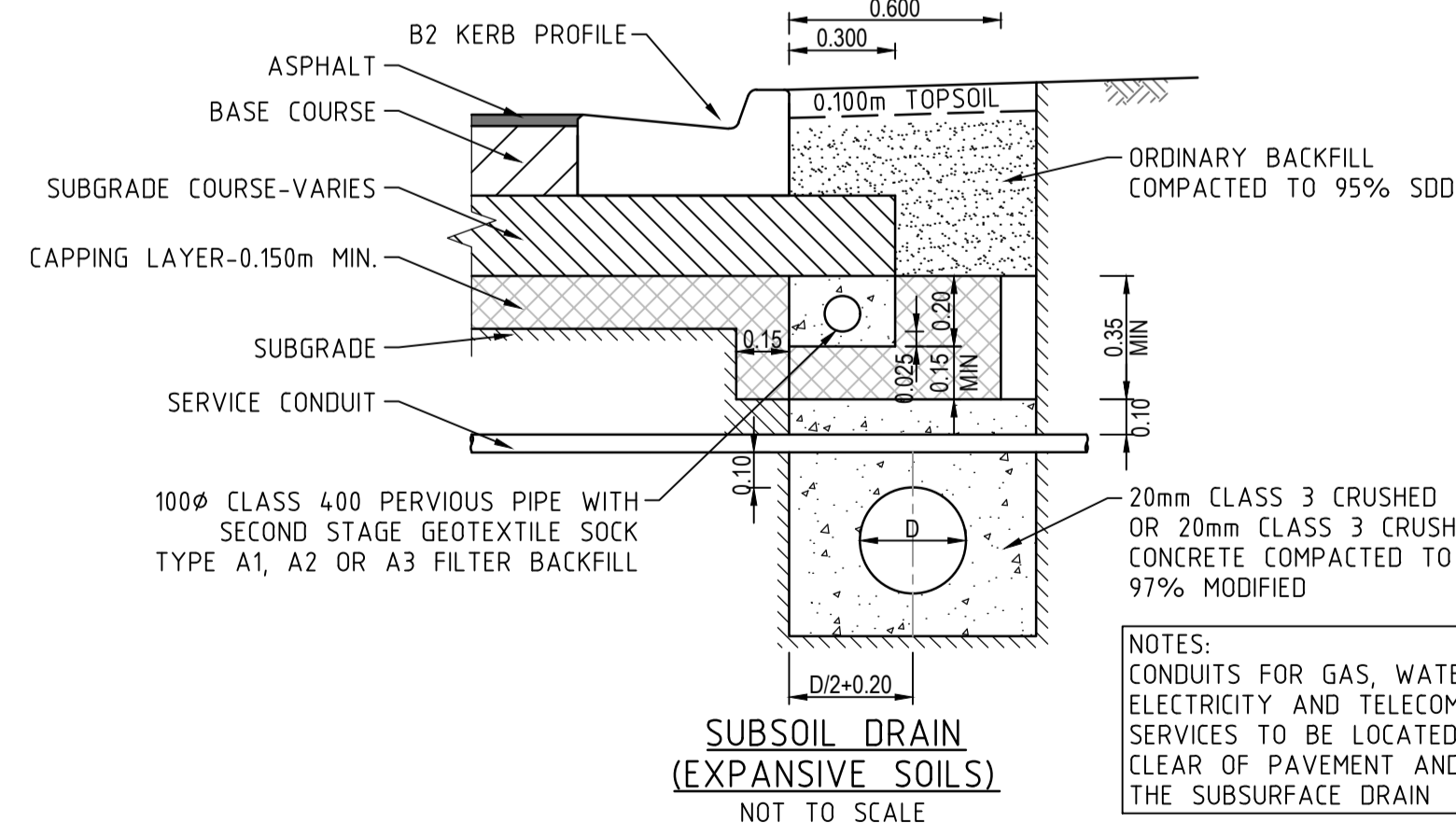
675mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	40	SIZE 14 TYPE V ASPHALT (CLASS 320 BINDER)
B INTERMEDIATE COURSE 1	80	SIZE 20 TYPE SI ASPHALT (CLASS 320 BINDER)
C INTERMEDIATE COURSE 2	75	SIZE 20 TYPE SI ASPHALT (CLASS 320 BINDER)
D SAMII SEAL	-	-
E PRIME	-	-
F BASE COURSE	180	SIZE 20 CLASS 3 2% CEMENT TREATED CRUSHED ROCK COMPACTED TO A MINIMUM 98% MODIFIED DRY DENSITY RATIO AND WITHIN ±2% OF MODIFIED OPTIMUM MOISTURE CONTENT. MINIMUM YOUNG'S MODULUS OF 500 MPA.
G UPPER BASE COURSE	-	-
H LOWER BASE	150	CLASS 4 CRUSHED ROCK COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
I CAPPING LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-9</sup> m/s. OR LIME STABILISED SITE WON CLAY WHICH CONFORMS TO THE PARAMETERS ABOVE.
J SUBGRADE	-	SUBGRADE CLAY AS FOUND (C.B.R = 2%) (IF REQUIRED, SUBGRADE IMPROVEMENT WORKS TO BE UNDERTAKEN TO COUNCIL'S SATISFACTION)



SPLITTER ISLAND TYPICAL SECTION  
NOT TO SCALE

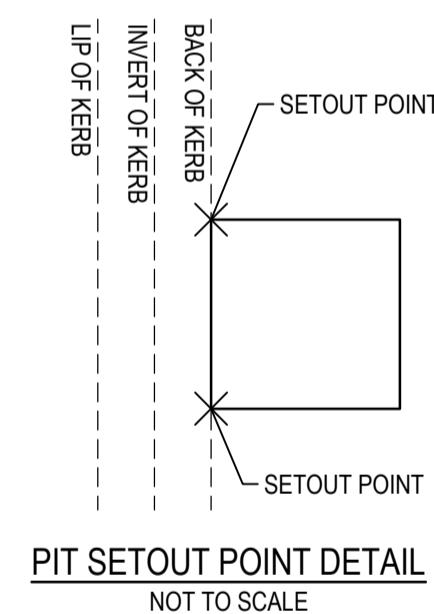


TYPICAL PARKING BAY DETAIL  
NOT TO SCALE

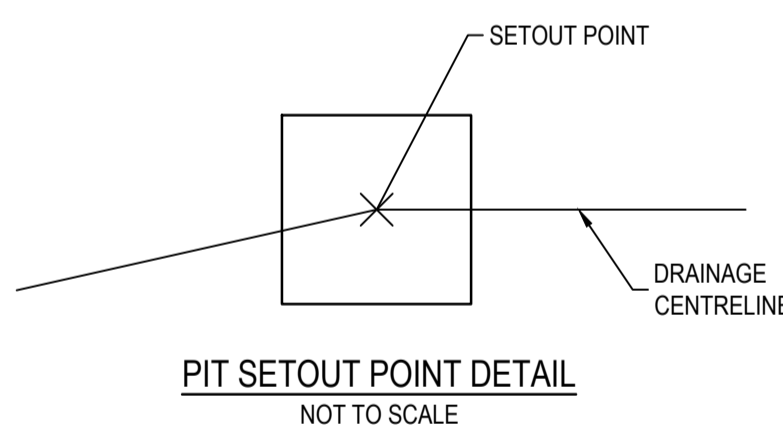


SUBSOIL DRAIN  
(EXPANSIVE SOILS)  
NOT TO SCALE

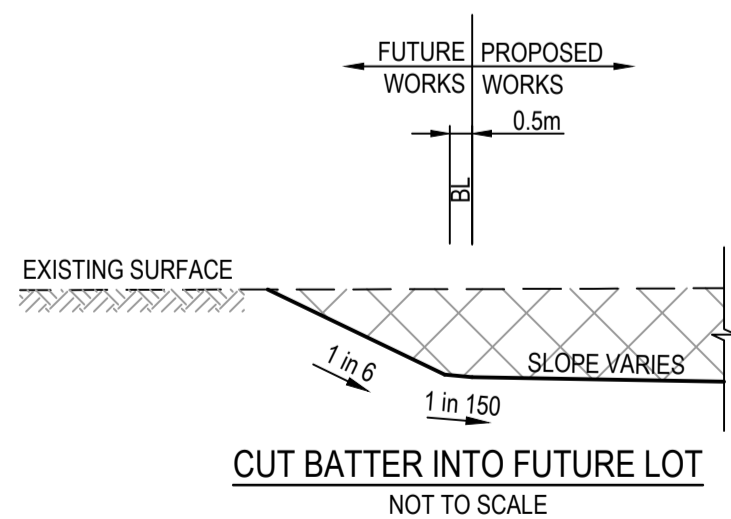
NOTES:  
CONDUITS FOR GAS, WATER, ELECTRICITY AND TELECOM SERVICES TO BE LOCATED CLEAR OF PAVEMENT AND THE SUBSURFACE DRAIN



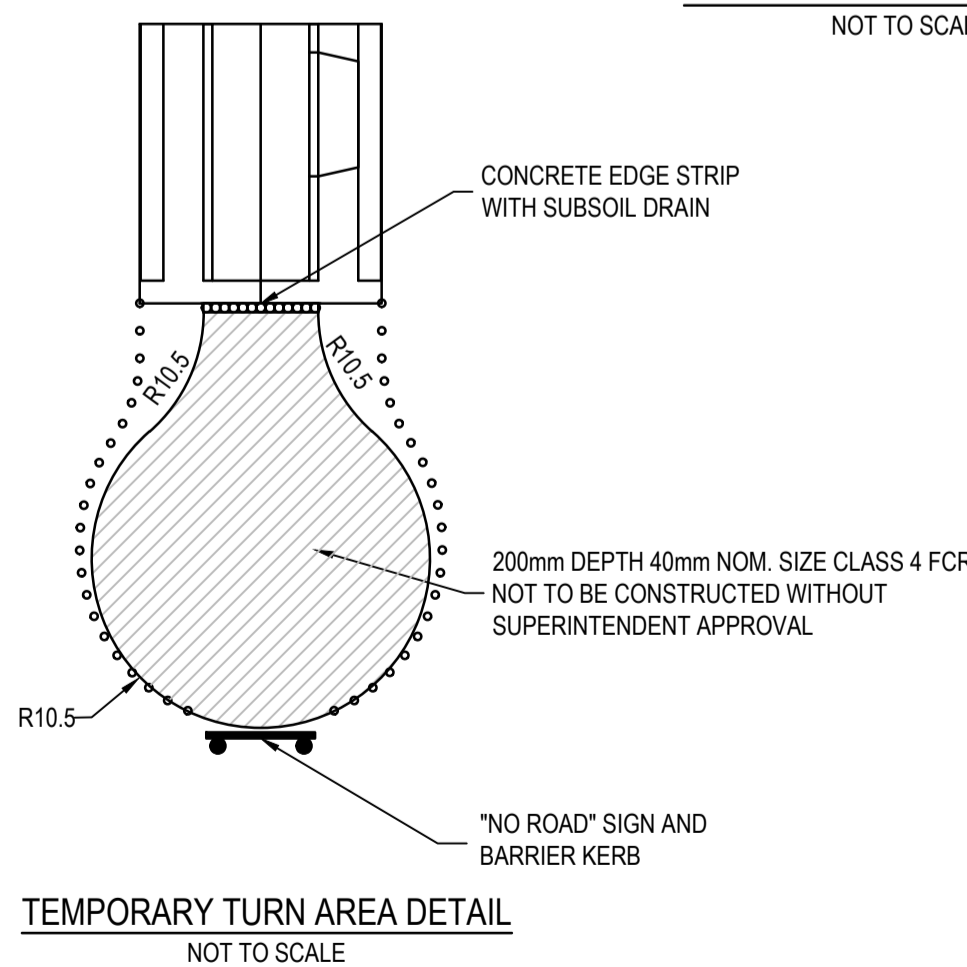
PIT SETOUT POINT DETAIL  
NOT TO SCALE



PIT SETOUT POINT DETAIL  
NOT TO SCALE



CUT BATTER INTO FUTURE LOT  
NOT TO SCALE

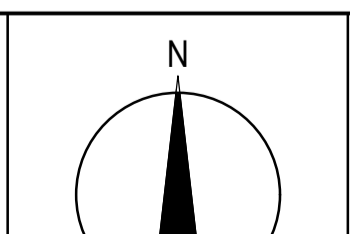
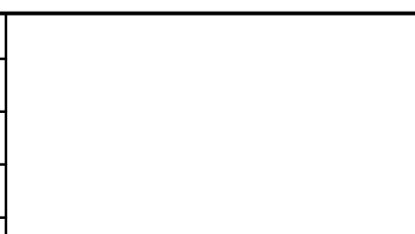


TEMPORARY TURN AREA DETAIL  
NOT TO SCALE

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



**SMEC**  
Member of the Surlana Jurong Group  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins Street  
Melbourne, VIC 3008  
Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Pavements Details

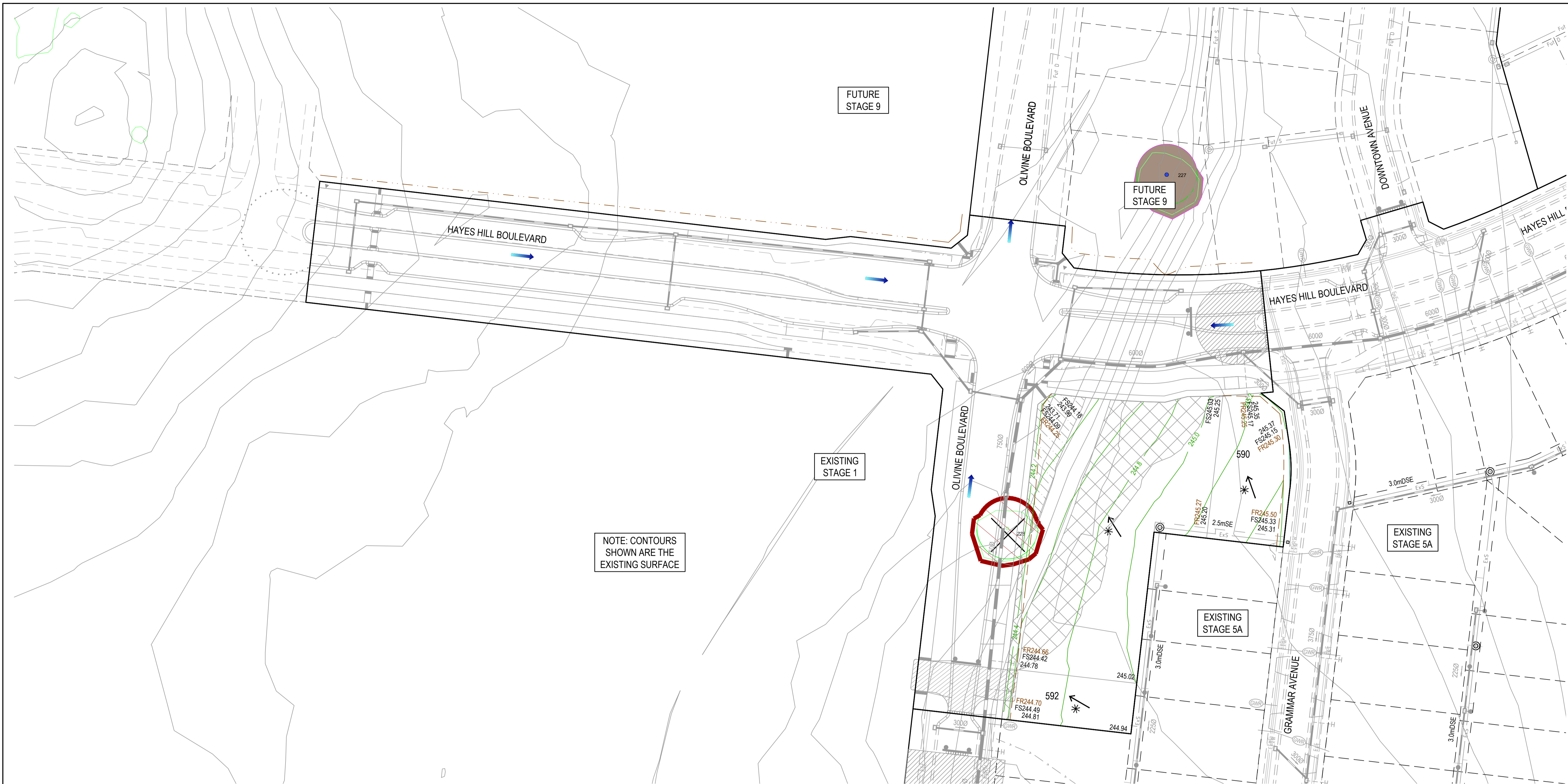
**AS CONSTRUCTED**

Quality Management ISO 9001  
OHS Management AS/NZS 4501  
Environmental Management ISO 14001  
Global-Mark.com.au®

SCALE AS SHOWN AT A1

MELWAYS REF: 8M2  
PROJECT / DRAWING No: 1700E-05B-18  
SHEET No: 18 of 20  
REVISION: 1

DWG PATH: V:\Vault\Projects\_Urban\1700E-Olivine\1700E-05B\Drawings\1700E-05B-18.dwg  
PRINTED BY: ZG11630 on 25/02/2020 at 04:34:44 PM



NOTE: CONTOURS SHOWN ARE THE EXISTING SURFACE

**LEGEND - LAYOUT PLAN**  
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY

	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SWALE DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	ELECTRICITY (U.GROUND)
	GAS
	TELSTRA
	WATER
	RECYCLE WATER
	AG DRAIN
	TRAFFIC SIGNAL CONDUITS & PITS
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SWALE DRAIN

	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING HOUSE DRAIN
	EXISTING ELECTRICITY (UNDER GROUND)
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING WATER
	EXISTING RECYCLED WATER
	EXISTING AG DRAIN
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SWALE DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE ELECTRICITY (UNDER GROUND)
	FUTURE GAS
	FUTURE TELSTRA
	FUTURE WATER

	FUTURE RECYCLED WATER
	FUTURE AG DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	ZERO LOT LINES
	EXISTING SURFACE LEVEL
	FINISHED BUILDING LINE LEVEL
	FINISHED RIDGE LINE LEVEL
	CHAINAGE
	TOP OF RETAINING WALL LEVEL
	BOTTOM OF RETAINING WALL LEVEL
	EXISTING RETAINING WALL
	RETAINING WALL
	FUTURE RETAINING WALL
	STRUCTURAL FILL > 200mm DEEP
	EXISTING STRUCTURAL FILL > 200mm DEEP
	CUT > 200mm DEEP
	DIRECTION OF FALL OVERLAND FLOW

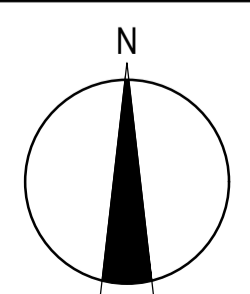
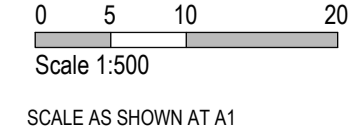
	GRADED IN DIRECTION OF FALL TO LEVEL INDICATED
	EDGE STRIP, SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER
	EXISTING RED GUMTREE & CANOPY TO BE REMOVED
	EXISTING OTHER SPECIES TREE & CANOPY TO BE REMOVED
	EXISTING RED GUM TO BE RETAINED
	EXISTING OTHER SPECIES TO BE RETAINED
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH
	PROPOSED SHARED FOOTPATH
	PROPOSED ROAD PAVING

**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. Locate all underground services before commencement of works **DIAL 1100 BEFORE YOU DIG**  
www.1100.com.au

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



**SMEC**  
Member of the Surlana Jurong Group  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins Street  
Melbourne, VIC 3008  
Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Earthworks Plan

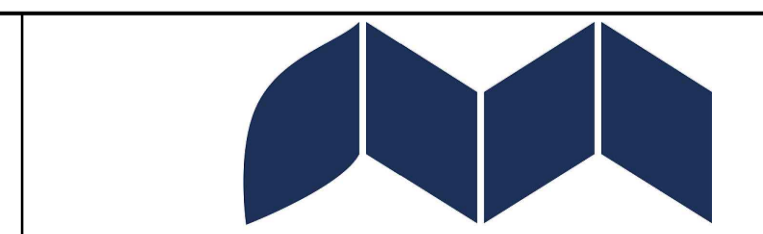
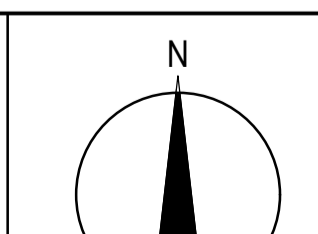
MELWAYS REF <b>8M2</b>	PROJECT / DRAWING No. <b>1700E-05B-19</b>	SHEET No. <b>19 of 20</b>	REVISION <b>1</b>
---------------------------	--	------------------------------	----------------------

PHASE	DISCIPLINE CODE	RISK REGISTER -Construction- Operations- Maintenance	POTENTIAL RISK	RISK OWNER	POTENTIAL CONSEQUENCES	POTENTIAL ELIMINATION MEASURE, DESIGN INITIATIVE or CONTROL (Identify any Standard or Code of practice used)	HOW ISSUE ADDRESSED IN DESIGN AND/OR CONSTRUCTION OF THE WORKS	IS THE RISK ELIMINATED YES/NO	Residual Risk Likelihood (0-5)	Residual Risk Consequence (0-5)	Residual Risk Rating	RESIDUAL RISK OWNER
			<b>Road Furniture / Roadside features</b>									
Construction	RD	#N/A	Construction close to live traffic	Contractor	Disruptions to live traffic, construction incident involving live traffic.	Provide safe temporary traffic control (TCP)	TCP provided within contract	N	5	3	15	Constructor
Construction	RD	#N/A	Culverts	Contractor	Potential risk from culverts under construction and height / fall hazards	Falling from a height	Temporary barriers to be provided	N	2	5	10	Constructor
Construction	US	#N/A	Utilities become a hazard within clear zones	Contractor	Vehicle conflict with utility / pit	Personal injury, vehicle damage	Sequence works and protect with temp barrier or traffic control (TCP)	N	1	5	5	Constructor
Operational	RD	#N/A	Sight Lines	Road Authority	Inadequate drivers response time.	Increased potential for accidents	Ensure design complies with relevant standard. Undertake thorough Safety Audit	N	1	4	4	Road Authority
Operational	LS	#N/A	Signs and street lights	Road Authority	Potential for drivers / riders to strike signs and street lights	Increased potential for accidents	Ensure design complies with relevant standard. Undertake thorough Safety Audit	N	1	4	4	Road Authority
Operational	RF	#N/A	Headwalls	Road Authority	Potential vehicle conflict within clear zone	Increased potential for accidents	Establish adequate clear zone provision	N	2	4	8	Road Authority
Operational	RD	#N/A	Culverts	Relevant Authority	Potential fall hazard during maintenance, by vehicles and pedestrians	Falling from a height	Barriers to be provided in accordance with road standards	N	2	5	10	Constructor
			<b>Retaining Walls</b>									
Construction	RW	#N/A	Retaining Wall Alignment	Contractor	Falling from height during construction or commissioning of walls and adjacent structures eg. sewer manholes	Falling from a height	Provide temporary and permanent fencing at top of wall.	N	1	1	1	Constructor
Operational	RW	#N/A	Retaining Wall Alignment	Road/ Local Authority	Lack of safe access/setback from road	Increased potential for accidents	Establish adequate and accessible clear zone provision. Provide guardrail where required	N	1	1	1	Authority
Operational	RW	#N/A	Retaining Wall Height	Road/ Local Authority	Potential for falling from height	Personal injury	Provide temporary and permanent fencing at top of wall.	N	1	5	5	Authority
Operational	RW	#N/A	Retaining Wall Design	Road/ Local Authority	Potential for wall failure	Increased potential for accidents	Structural design in accordance with standards, geotechnical conditions, end use and good practise.	N	1	5	5	Authority
			<b>Drainage</b>									
Operational	DR	#N/A	Grated Pits	Relevant Authority	Trip/fall hazard with large spaced grate	Increased potential for accidents	Provide pedestrian/bicycle friendly grates where applicable. Refer to pit schedule	N	3	2	6	Authority
Operational	DR	#N/A	Non Standard Large Pits	Relevant Authority	Potential for pit failure	Increased risk to maintenance crews/ vehicles	Structural design in accordance with relevant design principles.	N	1	4	4	Authority
Operational	DR	#N/A	Culvert Endwalls/Headwalls	Relevant Authority	Potential for falling from height	Increased potential for accidents	Fencing to be provided where culverts/headwalls are at height in accordance with relevant authority standards	N	1	4	4	Authority
Operational	DR	#N/A	Culvert Endwall/Headwall Outlets	Relevant Authority	Children playing in large pipes / watercourses and access for maintenance	Increased potential for accidents	Grate provided to authority standards	N	2	5	10	Authority
Maintenance	DR	#N/A	Access to Pits	Relevant Authority	Lack of safe access for maintenance	Increased risk to maintenance crews	Provide safe working conditions for maintenance. Provide safe landing/ access arrangements as per relevant authority standards	N	2	5	10	Authority
Maintenance	DR	#N/A	Deep Pits	Relevant Authority	Lack of safe entry for maintenance	Increased potential for accidents	Contractor to be certified for work in confined spaces, step irons to be provided to appropriate authority standards. Refer to pit schedule	N	1	5	5	Authority
Maintenance	DR	#N/A	Access to drains / culverts	Relevant Authority	Lack of safe access for maintenance	Increased risk to maintenance crews	Provide safe working conditions for maintenance. Access as approved by authority	N	2	3	6	Authority
			<b>Sewer</b>									
Construction	SE	#N/A	Sewer Manhole located adjacent to Retaining Wall Alignment	Contractor	Falling from height during construction or commissioning of adjacent sewer manholes	Falling from a height	Provide temporary fencing until such time that permanent fencing is constructed	N	1	1	1	Constructor
Maintenance	SE	#N/A	Deep Manholes	Relevant Authority	Lack of safe entry for maintenance	Increased potential for accidents	Contractor to be certified for work in confined spaces, landings and step access provided as per authority standards and schedule	N	1	5	5	Authority
Maintenance	SE	#N/A	Access to Manholes	Relevant Authority	Lack of safe access for maintenance	Increased risk to maintenance crews	Provide safe working conditions for maintenance. Manholes located in compliance with authority standards	N	1	5	5	Authority
Maintenance	SE	#N/A	Pump Station Access	Relevant Authority	Lack of safe access for maintenance	Increased risk to maintenance crews	Provide safe working conditions for maintenance	N	2	4	8	Authority
			<b>Electricity</b>									
Operational	ES	#N/A	Electrical Design	Relevant Authority	Location of assets within clear zones e.g. pits/ substations	Increased potential for accidents	Electrical designed by sub consultant with appropriate accreditation and in accordance with authority standards	N	2	3	6	Authority
			<b>Telstra</b>									
Operational	TE	#N/A	Telstra Design	Relevant Authority	Location of assets within clear zones e.g. pits	Increased potential for accidents	Telecommunications designed by authority consultant with appropriate accreditation and in accordance with authority standards	N	2	3	6	Authority
			<b>Water</b>									
Operational	WA	#N/A	Water Design	Relevant Authority	Location of assets within clear zones e.g. pits/ substations	Increased potential for accidents	Water pits designed in accordance with authority standards	N	2	3	6	Authority
			<b>Gas</b>									
Operational	GA	#N/A	Gas Design	Relevant Authority	Location of assets within clear zones e.g. pits/ substations	Increased potential for accidents	Water pits designed in accordance with authority standards	N	1	1	1	Authority

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	14.06.19	ISSUED FOR CONSTRUCTION	SM/RB	AB
1	21.02.20	AS CONSTRUCTED	SM/SM	AB

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



Olivine Estate - Stage 5B  
Whittlesea City Council  
Road and Drainage  
Safety in Design

**AS CONSTRUCTED**



Global-Mark.com.au®

SCALE AS SHOWN AT A1

MELWAYS REF 8M2

PROJECT / DRAWING No. 1700E-05B-85

SHEET No. 20 of 20

REVISION 1