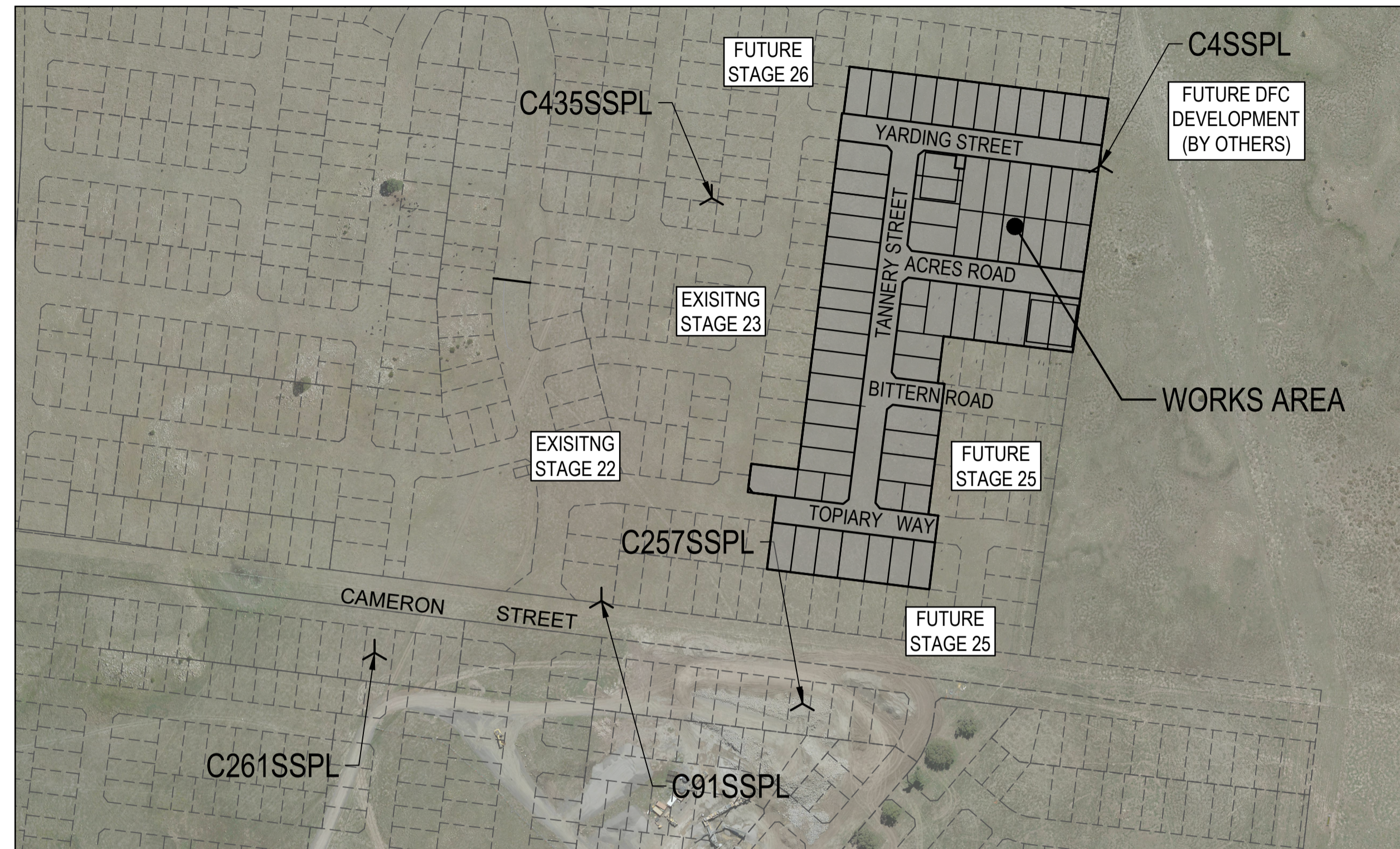


Olivine Estate Stage 24



GENERAL NOTES (WHITTLESEA CITY COUNCIL)

- THE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT COUNCIL STANDARD DRAWINGS AND SPECIFICATIONS. WORKS TO BE CARRIED OUT TO THE SATISFACTION OF COUNCIL'S SURVEILLANCE COORDINATOR OR HIS REPRESENTATIVE.
- 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 THEIR INTENTION TO COMMENCE TRENCHING OPERATIONS WHERE TRENCHES ARE 1.5 METRES OR DEEPER.
 - ENSURE THAT THE MINE MANAGER OR THEIR DEPUTY AS REQUIRED BY THE REGULATIONS IS IN ATTENDANCE WHEN TRENCHING OPERATIONS ARE IN PROGRESS.
- THE CONTRACTOR IS TO NOTIFY COUNCIL'S SENIOR SURVEILLANCE ENGINEER AND ALL SERVICE AUTHORITIES SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL ROAD CHAINAGES ARE MEASURED ALONG THE ROAD CENTRELINE EXCEPT KERB RETURNS AND COURTHHEADS, 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.
- THE CONTRACTOR SHALL COOPERATE WITH OTHER AUTHORITIES AND SHALL ENSURE THAT ALL SERVICES ARE INSTALLED PRIOR TO THE FINAL PAVEMENT COURSE. THE CONTRACTOR SHALL CHECK WITH THE SUPERINTENDENT THE EXACT LOCATION OF ALL SERVICES PRIOR TO THE INSTALLATION OF CONDUITS.
- ANY EXISTING PAVEMENT OR DRAINAGE WORKS DAMAGED DURING CONSTRUCTION OR THE MAINTENANCE PERIOD TO BE REINSTATED TO THE SATISFACTION OF THE COUNCIL REPRESENTATIVE.
- 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. APPROPRIATE SILTATION CONTROL IS TO BE CARRIED OUT DURING THE CONSTRUCTION AND MAINTENANCE PERIODS.
- 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.
- ALL TREES AND SHRUBS TO BE RETAINED UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT AUTHORITY BECAUSE ROAD CONSTRUCTION NECESSITATES THEIR REMOVAL, OR REMOVAL IS DIRECTED BY THE AUTHORISED ENGINEER. TREES TO BE REMOVED ARE TO BE SUITABLY LABELLED. WHEN IT IS PROPOSED TO REMOVE EXISTING TREES IN ROAD RESERVES OR COUNCIL RESERVES, CONSULTATION IS TO OCCUR WITH COUNCIL'S PARKS AND GARDENS DEPARTMENT.
- VICROADS ROADWORK SIGNING CODE OF PRACTICE WHICH COMPLIES WITH THE AUSTRALIAN STANDARD 1742.3-2002 IS TO BE ADHERED TO DURING THE CONSTRUCTION WORKS.
- 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), R (RECYCLED WATER) AND C (COUNCIL COMMUNICATION) AS PER STANDARD DRAWING EDM 303.
- ALL EARTHWORKS TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S EARTHWORK SPECIFICATION AND THE EARTHWORKS SECTION OF SMEC'S CONTRACT SPECIFICATION.
- BATTERS INTO ALLOTMENTS SHALL NOT BE STEEPER THAN 1 IN 6 UNLESS NOTED OTHERWISE.
- ALL EXCAVATED OR FILLED AREAS OUTSIDE THE ROAD RESERVE AND NATURESTRIPS TO BE STRIPPED OF TOPSOIL AND STOCKPILED PRIOR TO EARTHWORK COMMENCING.
- NO FILLING OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE UNLESS DIRECTED BY THE SUPERINTENDENT.
- NO TOPSOIL TO BE REMOVED FROM SITE UNLESS OTHERWISE APPROVED.
- LOTS SHALL BE EVENLY GRADED TO ENSURE MINIMUM LOT FALLS AS SPECIFIED ON DRAWINGS ARE ACHIEVED.
- ALL DRAINAGE PIPES TO BE CLASS 2 RCP UNLESS NOTED OTHERWISE. ALL DRAINAGE PIPE UP TO AND INCLUDING 750mm IN DIAMETER SHALL BE RUBBER RING JOINTED. PIPES ABOVE THIS SIZE MAY BE FLUSH JOINTED WITH EXTERNAL SEALING BANDS. RUBBER RING PIPES TO BE PRESSURE RESISTANT, I.E. SPECIFIC MANUFACTURERS RUBBER RING TO BE USED, SUITED TO PRESSURE CONDITIONS AND THE PIPES ARE NOT TO HAVE ANY PLUGS.
- ALL PITS GREATER THAN OR EQUAL TO 1000mm DEPTH TO BE PROVIDED WITH STEP IRONS IN ACCORDANCE WITH EDM 609.
- ALL DRAINAGE TRENCHES UNDER ROAD PAVEMENTS, KERB & CHANNEL, PARKING BAYS, DRIVEWAYS, FOOTPATHS AND BEHIND KERBS & CHANNEL SHALL BE BACKFILLED WITH COMPACTED CRUSHED ROCK AS SPECIFIED. OFFSETS TO DRAINAGE IN EASEMENTS AS SHOWN ARE TO THE CENTRELINE OF THE DRAIN.
- AG DRAINS TO BE PROVIDED BEHIND ALL KERBS AND SHALL HAVE SUITABLE OUTLET. CONSTRUCTION TO BE IN ACCORDANCE WITH EDM 605-608.
- HOUSE DRAINS ARE TO BE CONNECTED DIRECT TO UNDERGROUND DRAIN UNLESS NOTED OTHERWISE.
- PROPERTY INLET PITS AS PER EDM 701-704.
- DRIVEWAYS TO BE CONSTRUCTED IN ACCORDANCE WITH COUNCIL'S STANDARDS AND CLEAR OF DRAINAGE PITS, SEWER MAINTENANCE HOLES AND EXISTING TREES.
- FOOTPATHS ARE TO BE OFFSET 50mm FROM THE BUILDING LINE.
- ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS SHOULD BE TO AS1742.2 AND 1742.1 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.
- UPON COMPLETION OF CONSTRUCTION, THE WHOLE SITE SHALL BE CLEANED UP AND GRADED OVER. ALL RUBBISH IS TO BE REMOVED AND THE SITE IS TO BE LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERINTENDENT.
- ALL SERVICE TRENCHES UNDER FOOTPATH, ROAD PAVEMENTS, VEHICLE CROSSINGS AND OTHER ROAD STRUCTURES ARE TO BE BACKFILLED IN ACCORDANCE WITH RELEVANT COUNCIL AND AUTHORITY STANDARDS. FOOTPATHS ARE TO BE CONTINUOUSLY REINFORCED CONCRETE IN ACCORDANCE WITH EDM 403 UNLESS OTHERWISE SPECIFIED.
- A BUILDING PERMIT MUST BE OBTAINED FOR ANY STRUCTURE/RETAINING WALL EXCEEDING 1.0m IN HEIGHT PRIOR TO COMMENCEMENT OF CONSTRUCTION, IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA. COPY OF BUILDING PERMITS AND 'CERTIFICATE OF COMPLIANCE - CONSTRUCTION' (REGARDLESS OF HEIGHT) FOR ALL COMPONENTS OF RETAINING WALL INCLUDING AG DRAINS TO BE SUBMITTED TO COUNCIL PRIOR TO STATEMENT OF COMPLIANCE.

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- 1700E-024-251 Cross Sections: Yarding Street - 1 Ch30.00 - Ch 121.00
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- 1700E-024-500 Safety In Design

TBM SETOUT TABLE				
POINT	EAST	NORTHING	ELEVATION	DESCRIPTION
C435SSPL	323,176.76	5,844,593.31	251.84	STAR PICKET
C4SSPL	323,407.60	5,844,612.52	254.75	STAR PICKET
C91SSPL	323,111.41	5,844,354.26	246.33	STAR PICKET
C257SSPL	323,230.60	5,844,293.25	247.43	STAR PICKET
C261SSPL	322,976.76	5,844,323.39	244.79	STAR PICKET

ROAD LAYOUT TABLE								
ROAD NAME	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
YARDING STREET	16	6.40	7.30	7.60	B2	B2	4.35	4.35
ACRES ROAD	16	6.40	7.30	7.60	B2	B2	4.35	4.35
BITTERN ROAD	16	6.40	7.30	7.60	B2	B2	4.35	4.35
TOPIARY WAY	16	6.40	7.30	7.60	B2	B2	4.35	4.35
TANNERY STREET	16	6.40	7.30	7.60	B2	B2	4.35	4.35

SERVICES OFFSET SCHEDULE										
ROAD NAME	GAS		NON-DRINKING WATER		DRINKING WATER		ELECTRICITY		NBN	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
YARDING STREET	NORTH	2.10	NORTH	2.60	NORTH	3.10	SOUTH	2.55	SOUTH	1.85
ACRES ROAD	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	2.55	NORTH	1.85
BITTERN ROAD	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	2.55	NORTH	1.85
TOPIARY WAY	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	2.55	NORTH	1.85
TANNERY STREET	WEST	2.10	WEST	2.60	WEST	3.10	EAST	2.55	EAST	1.85

WARNING
SAFETY MEASURES REQUIRED
Please note there are risks attached to the construction of this project, and any ongoing maintenance of structures. Consider the safety of all. For potential risks, consequences and controls refer to Safety In Design Risk Register SID P4.E6. 1700E-024-500
ASSESS THE RISK - STAY SAFE

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
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AS CONSTRUCTED PLANS

The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.

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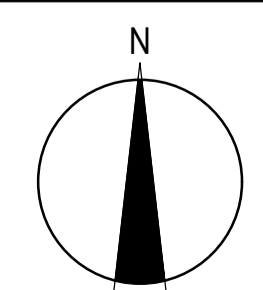
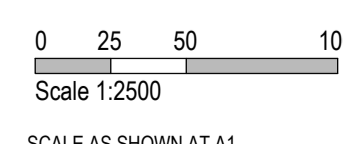
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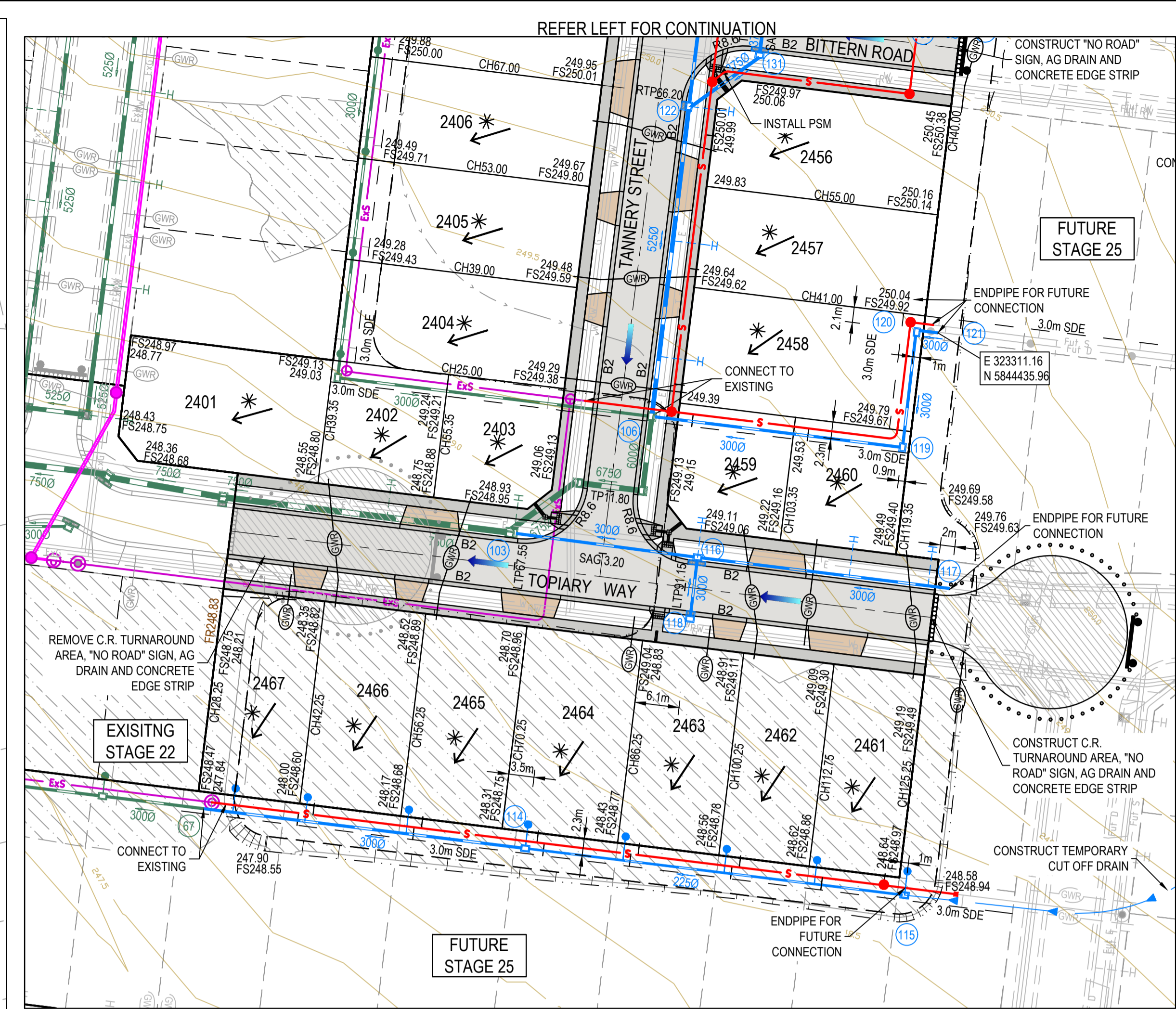
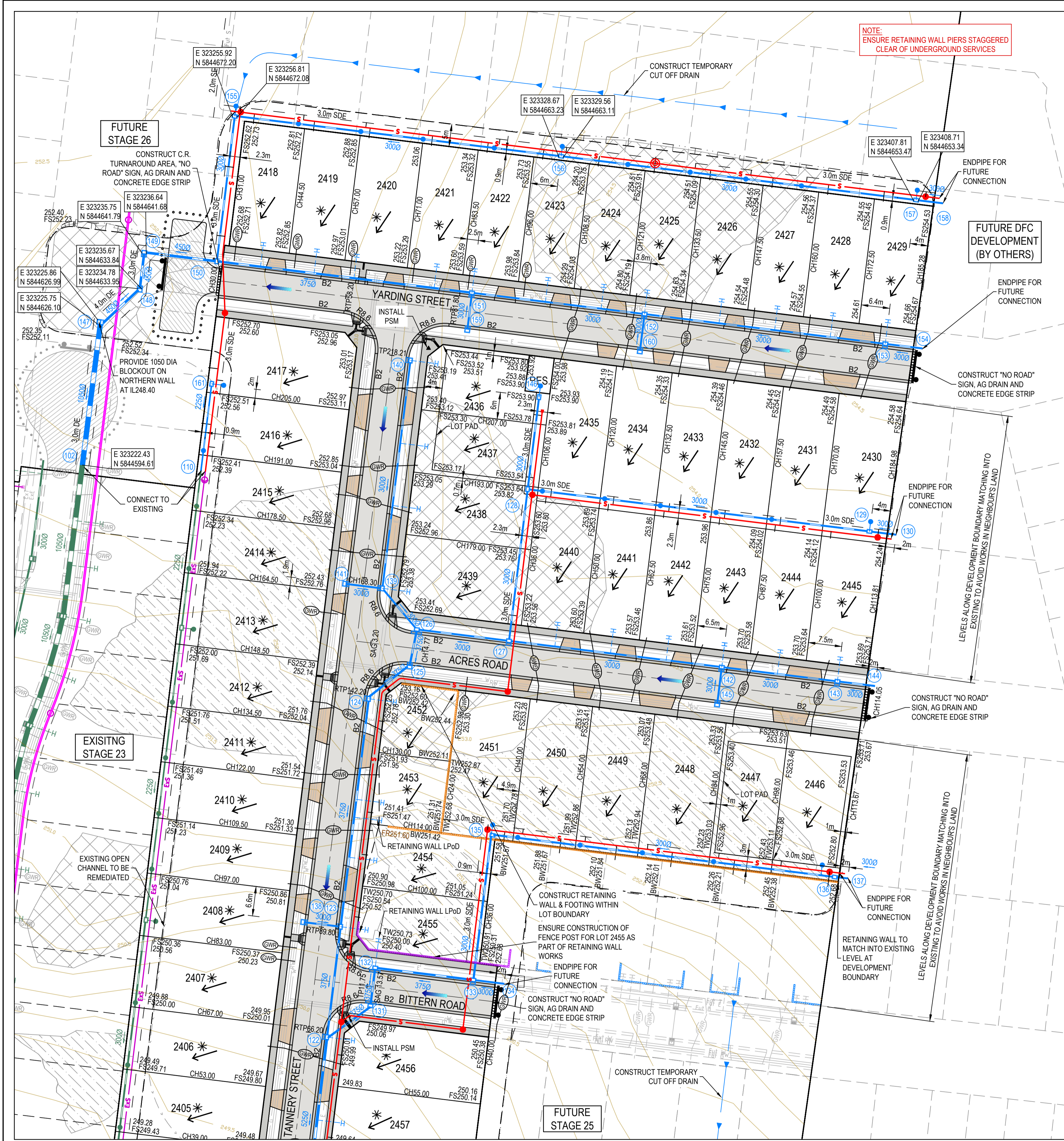
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Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Cover Plan & General Notes

MELBAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-101	SHEET No. 01 of 27	REVISION 2
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NOTE:
ENSURE RETAINING WALL PIERS STAGGERED
CLEAR OF UNDERGROUND SERVICES

REFER LEFT FOR CONTINUATION

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Locate all underground services before commencement of works
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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)
	ELECTRICITY (O HEAD)
	GAS
	TELSTRA
	OPTIC FIBRE
	WATER
	RECYCLE WATER
	AG. DRAIN
	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 ELECTRICITY OVERHEAD
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING OPTIC FIBRE
	EXISTING WATER
	EXISTING RECYCLED WATER
	EXISTING AG. DRAIN
	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SWALE DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE ELECTRICITY (UNDER GROUND)
	FUTURE ELECTRICITY OVERHEAD
	FUTURE GAS
	FUTURE TELSTRA

	FUTURE OPTIC FIBRE
	FUTURE WATER
	FUTURE RECYCLED WATER
	FUTURE AG. DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	ZERO LOT LINES
	141.34 EXISTING SURFACE LEVEL
	FS140.35 FINISHED BUILDING LINE LEVEL
	FR157.40 FINISHED RIDGE LINE LEVEL
	CH270.00 CHAINAGE
	TW159.60 TOP OF RETAINING WALL LEVEL
	BW159.00 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 GUM TREE & 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 INDUSTRIAL DRIVEWAY
	PROPOSED SHARED FOOTPATH
	PROPOSED ROAD PAVING
	EXISTING ROAD PAVING

AS CONSTRUCTED PLANS

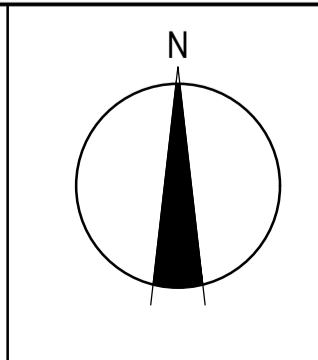
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Quality Management ISO 9001
OHS Management AS/NZS 4801
Environmental Management ISO 14001

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PERMIT REF. NO. 719067

AS CONSTRUCTED

Scale 1:500
SCALE AS SHOWN AT 1

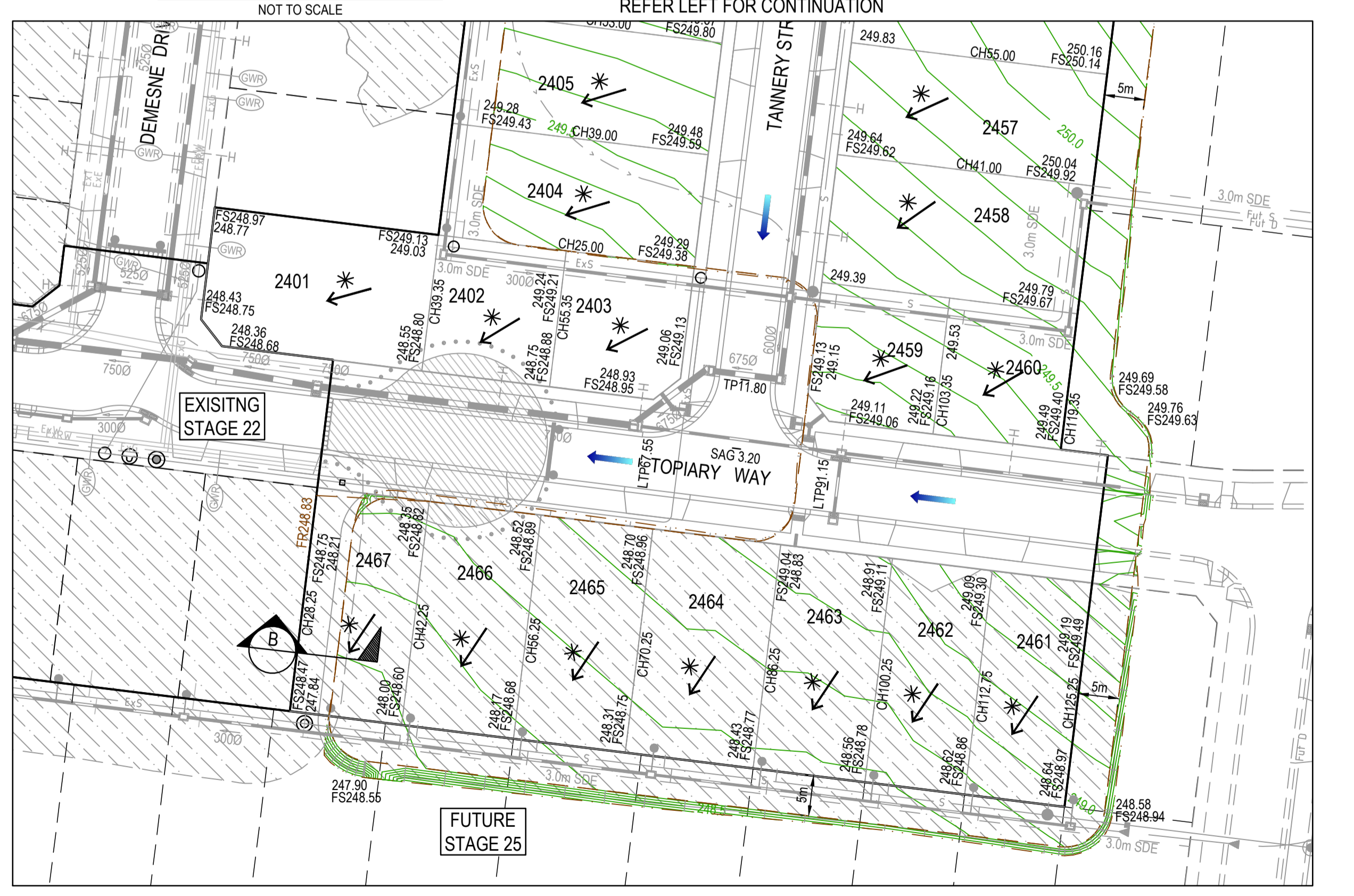
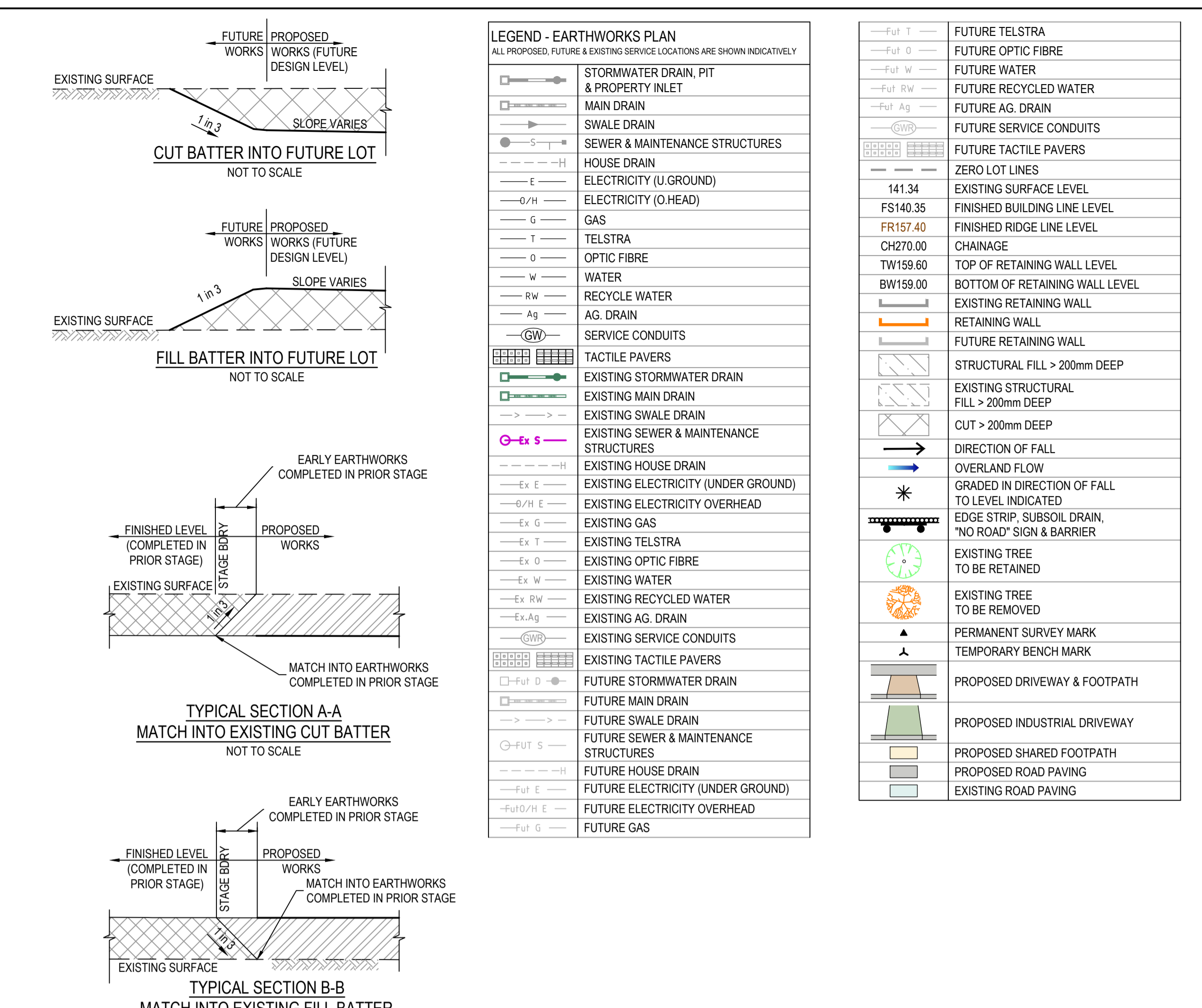


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Collins Square, Tower 4, Level 20, 727 Collins St
Melbourne, VIC, 3008, Australia
03 9514 1500

mirvac

Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Layout Plan

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-111	SHEET No. 02 of 27	REVISION 3
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AS CONSTRUCTED PLANS

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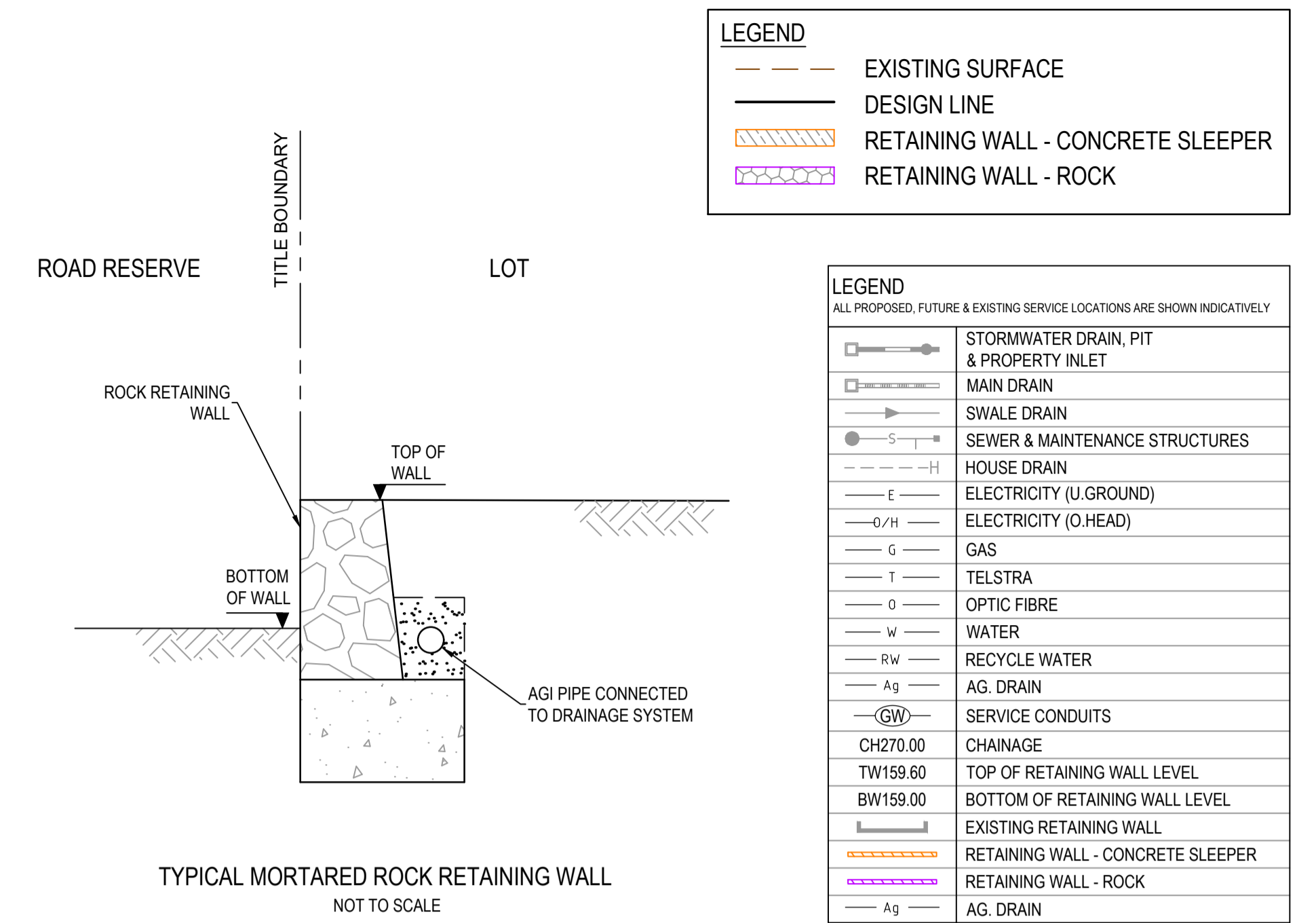
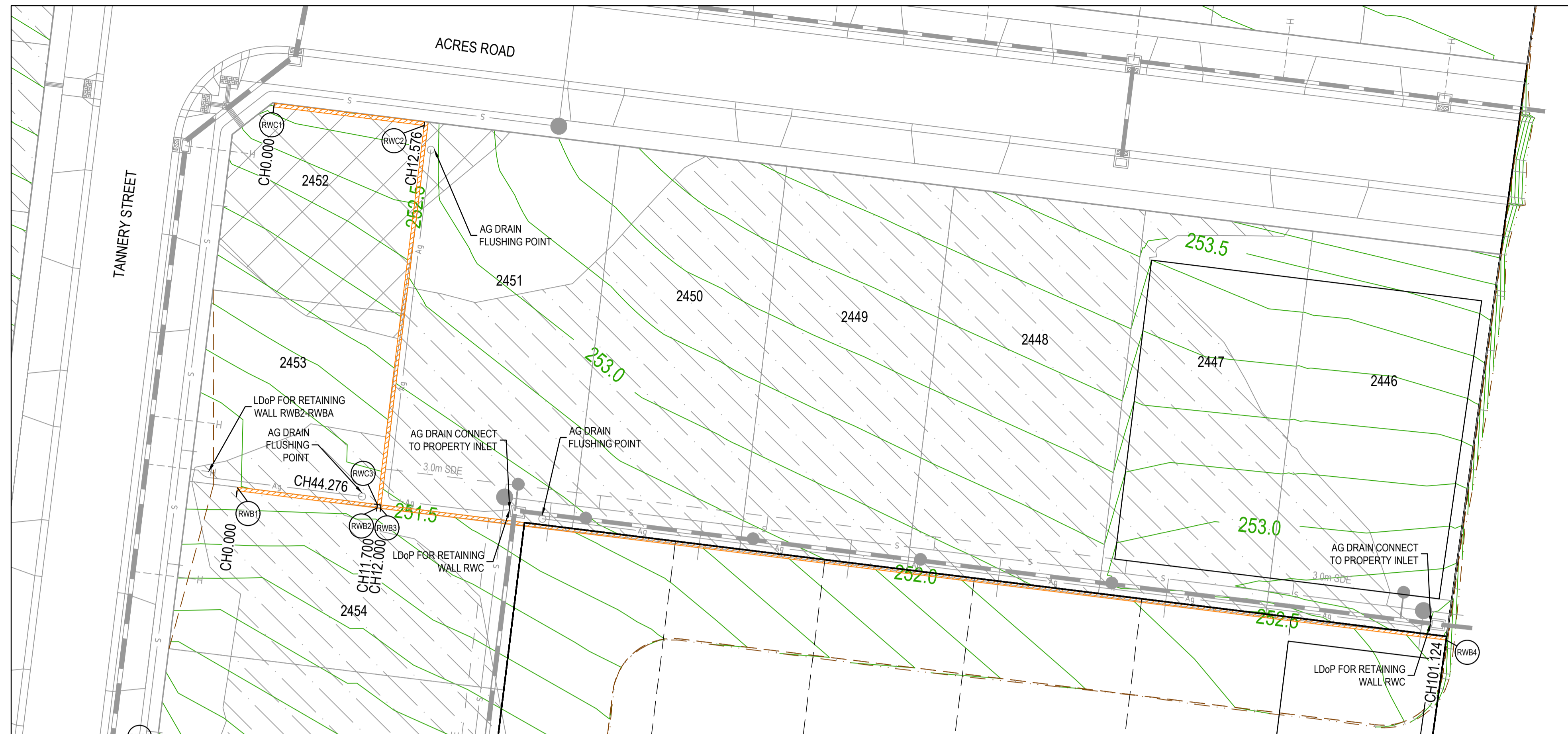
Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Earthworks & Retaining Wall Setout Plan

MELWAYS REF
8M2

PROJECT / DRAWING No.
1700E-024-131

SHEET No.
03 of 27

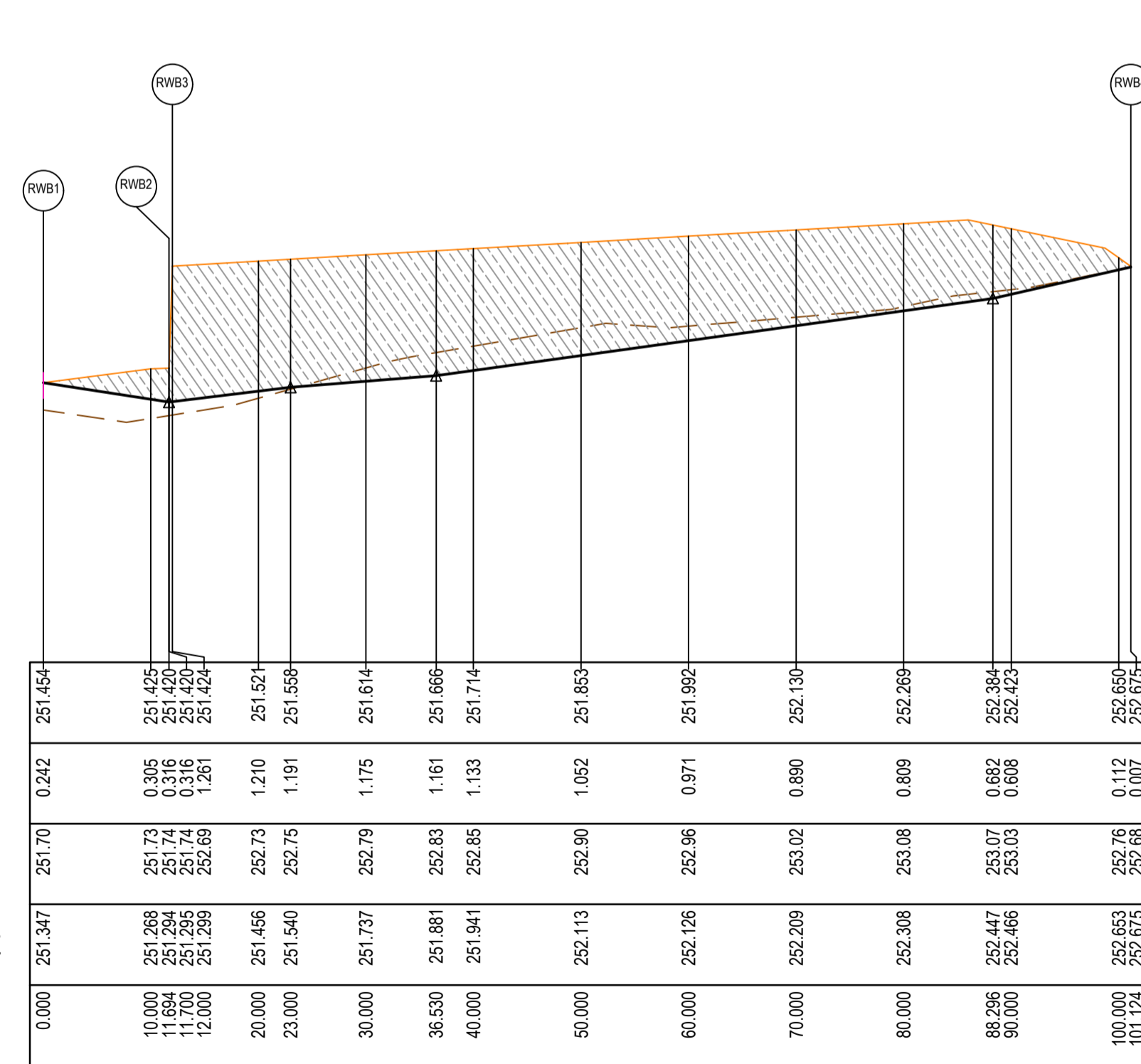
REVISION
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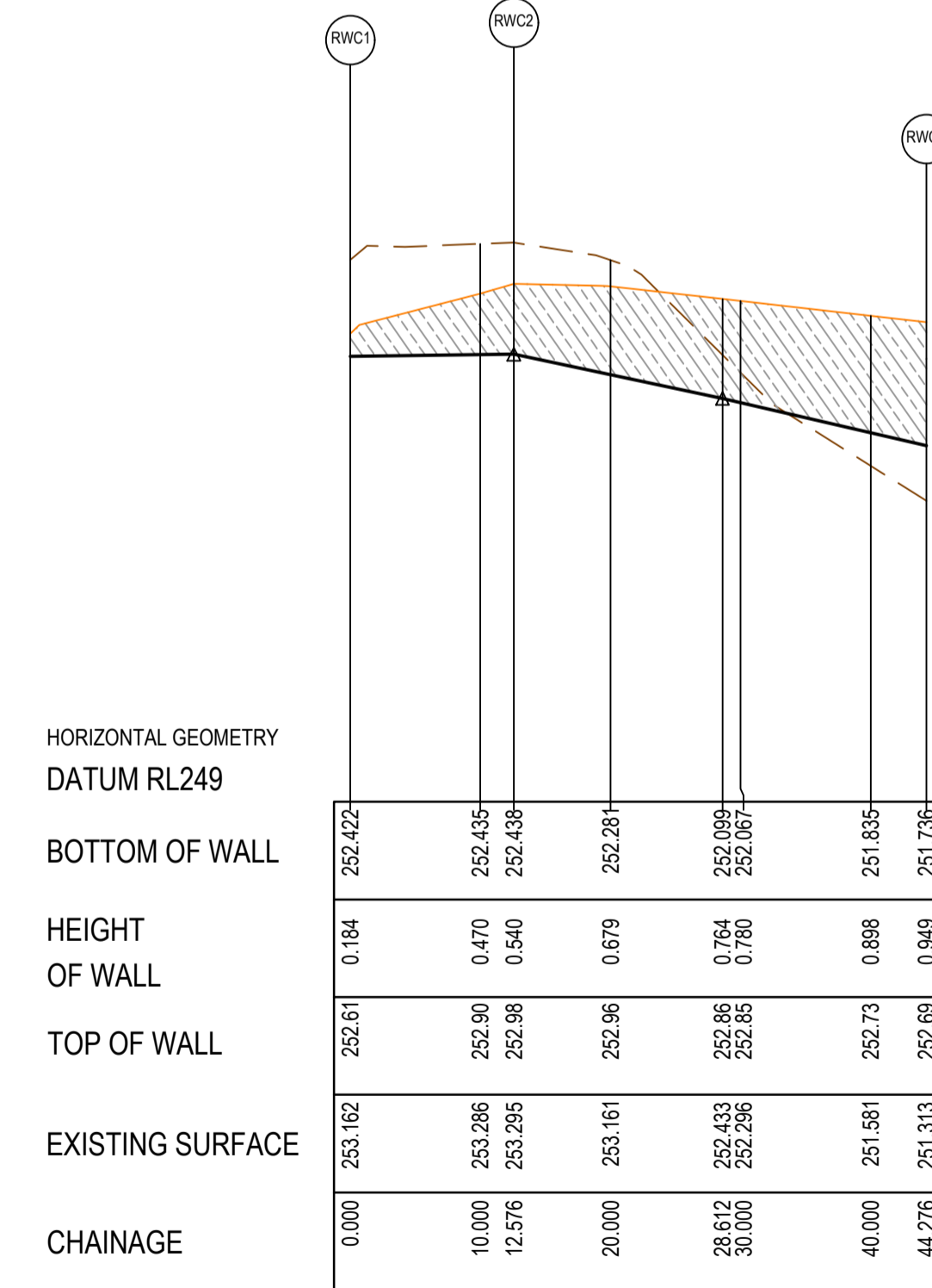
RETAINING WALL DESIGN AND APPROVALS REQUIREMENTS

NOTE: RETAINING WALL DETAILS AND DESIGN CERTIFICATION TO BE SUBMITTED TO COUNCIL PRIOR TO COMMENCEMENT OF CONSTRUCTION OF WALLS

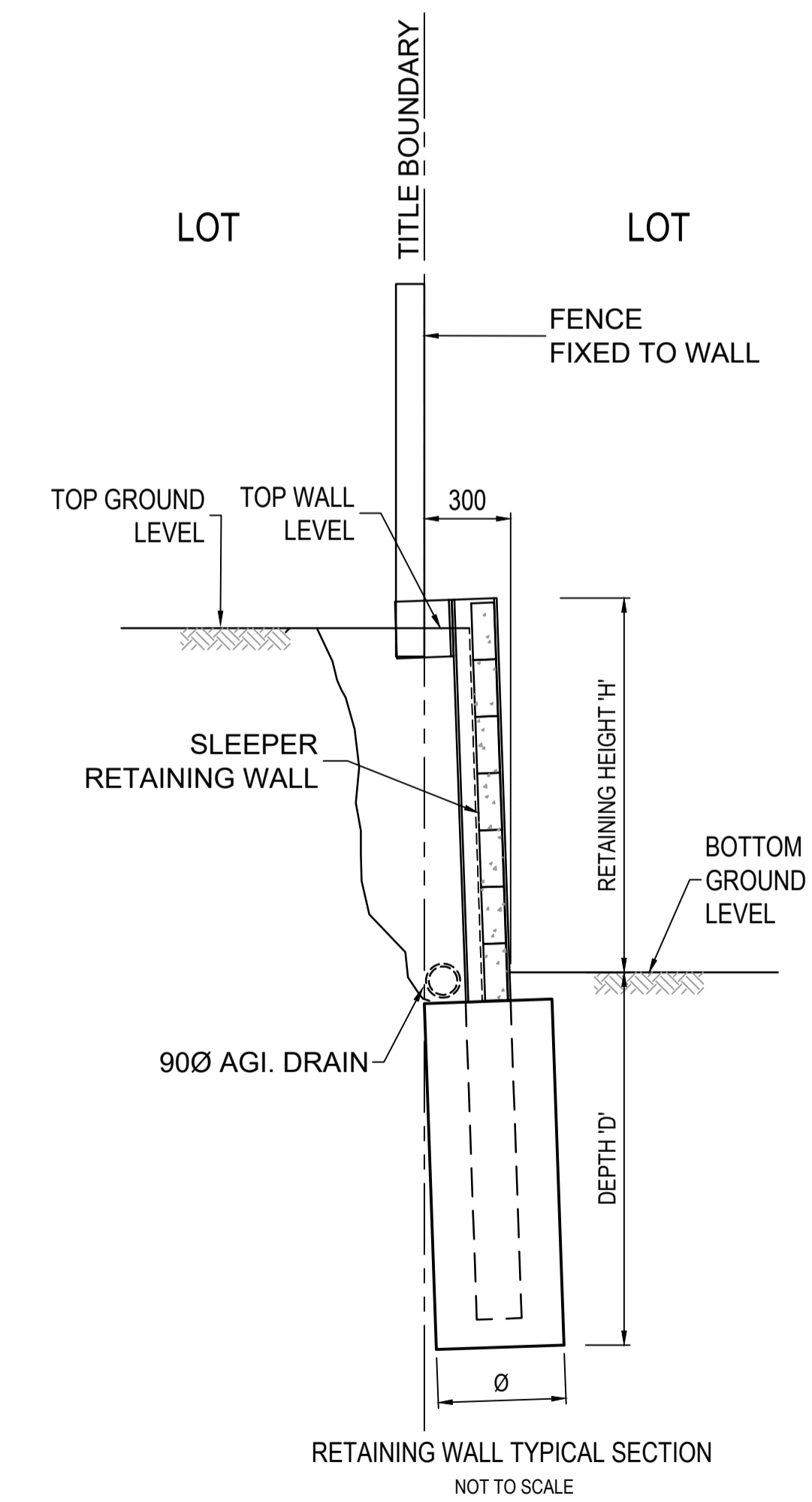
- RETAINING WALLS**
- CONTRACTOR TO OBTAIN ANY RELEVANT BUILDING PERMITS. COPY OF BUILDING PERMIT TO BE PROVIDED TO PRINCIPAL.
 - CONTRACTOR TO PROVIDE STRUCTURAL ENGINEER INSPECTION AND CERTIFICATION FOR CONSTRUCTION OF ALL WALLS, IRRESPECTIVE OF NEED FOR PERMIT OR OTHERWISE.
 - CONTRACTOR TO ENSURE ALL REQUIREMENTS OF BUILDING PERMIT HAVE BEEN ADDRESSED.



RETAINING WALL RWB - LONGITUDINAL SECTION



RETAINING WALL RWC - LONGITUDINAL SECTION



RETAINING WALL TYPICAL SECTION
NOT TO SCALE

ALIGNMENT RWB

Point no	Easting	Northing	RL
RWB1	323290.544	5844513.868	251.454
RWB2	323302.156	5844512.435	251.420
RWB3	323302.453	5844512.399	251.424
RWB4	323390.907	5844501.485	252.675

ALIGNMENT RWC

Point no	Easting	Northing	RL
RWC1	323293.593	5844545.735	252.422
RWC2	323306.074	5844544.195	252.438
RWC3	323302.192	5844512.733	251.736

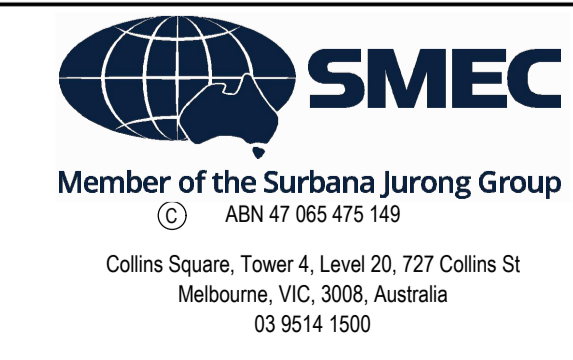
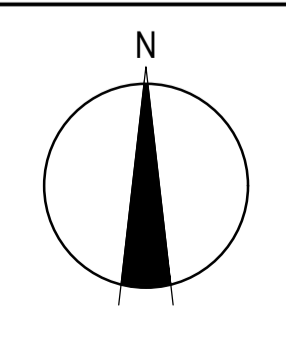
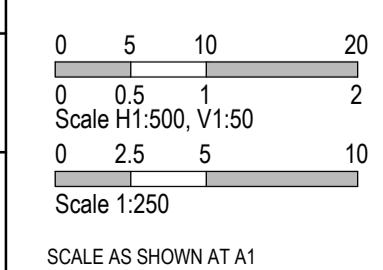
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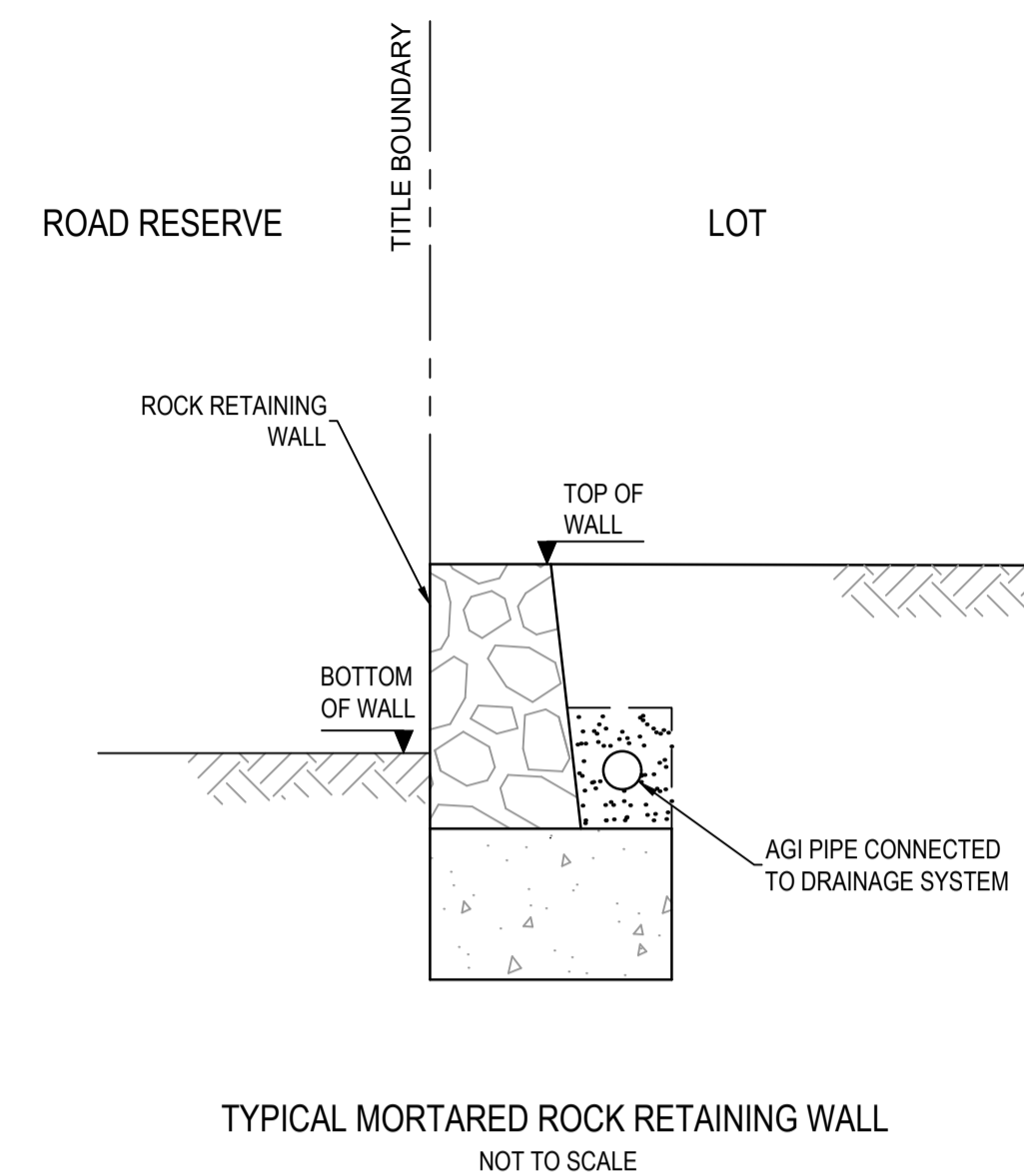
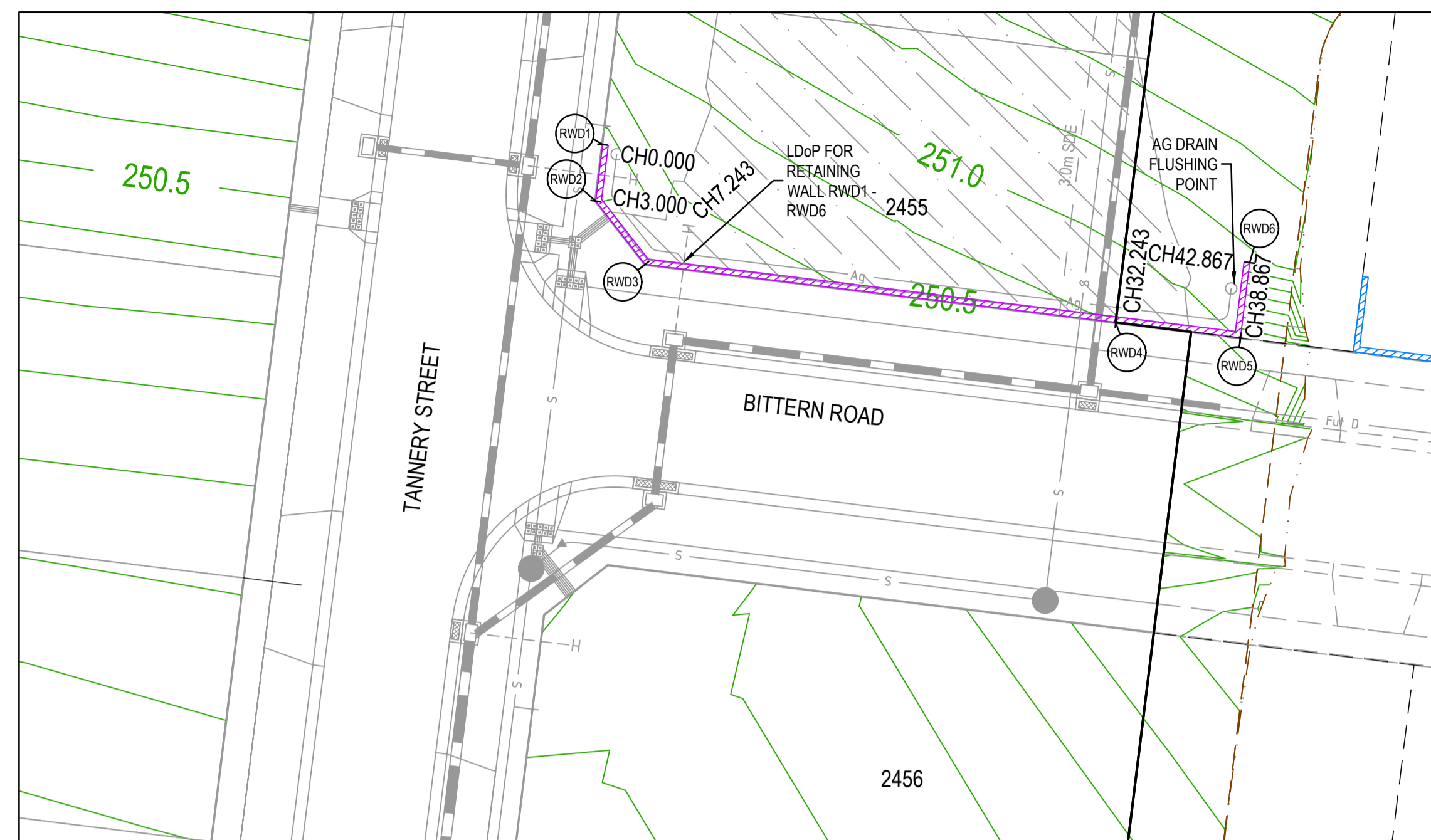
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719067

AS CONSTRUCTED



Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Retaining Wall Longitudinal Sections - 1

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-132	SHEET No. 04 of 27	REVISION 2
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LEGEND	
	EXISTING SURFACE
	DESIGN LINE
	RETAINING WALL - CONCRETE SLEEPER
	RETAINING WALL - ROCK

LEGEND	
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)
	ELECTRICITY (O.HEAD)
	GAS
	TELSTRA
	OPTIC FIBRE
	WATER
	RECYCLE WATER
	AG DRAIN
	SERVICE CONDUITS
	CHAINAGE
	TOP OF RETAINING WALL LEVEL
	BOTTOM OF RETAINING WALL LEVEL
	EXISTING RETAINING WALL
	RETAINING WALL - CONCRETE SLEEPER
	RETAINING WALL - ROCK
	AG DRAIN

TYPICAL MORTARED ROCK RETAINING WALL
NOT TO SCALE

RETAINING WALL DESIGN AND APPROVALS REQUIREMENTS

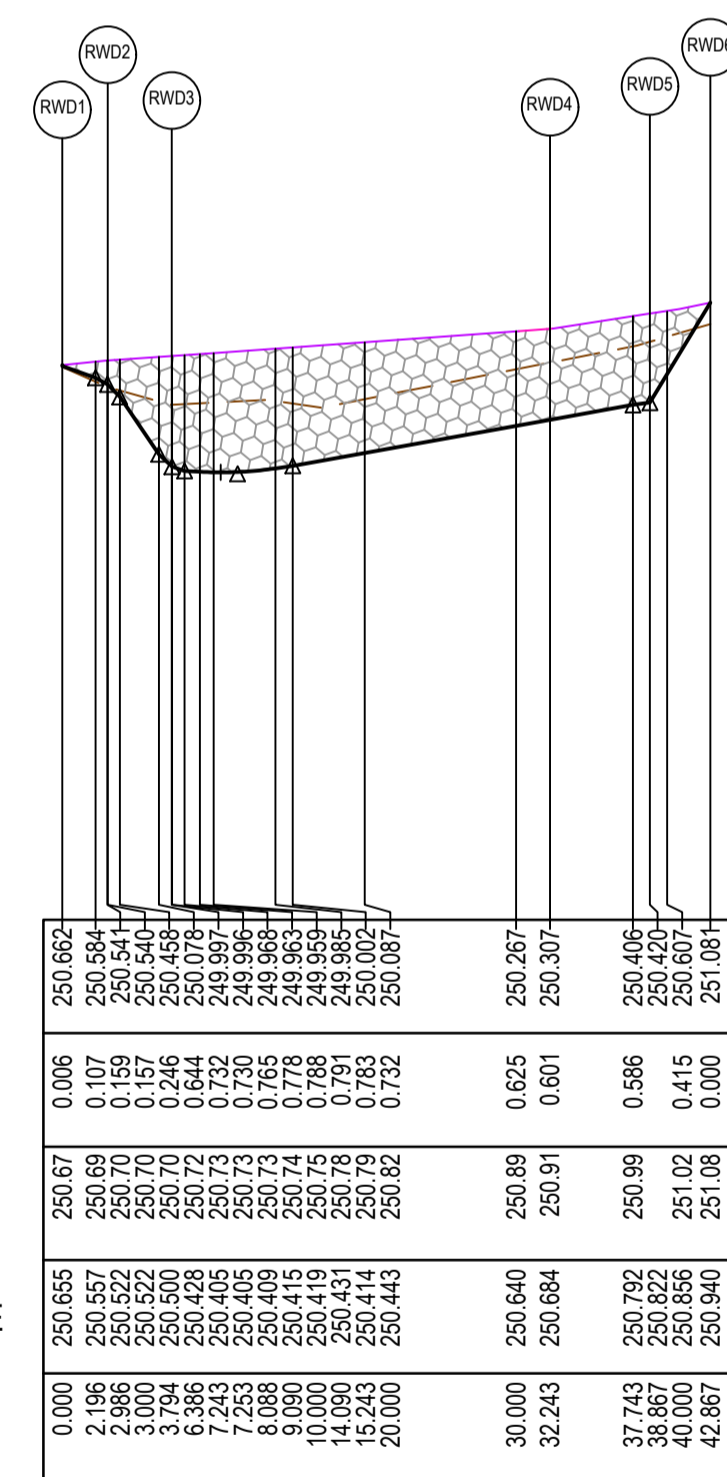
NOTE: RETAINING WALL DETAILS AND DESIGN CERTIFICATION TO BE SUBMITTED TO COUNCIL PRIOR TO COMMENCEMENT OF CONSTRUCTION OF WALLS

RETAINING WALLS

- CONTRACTOR TO OBTAIN ANY RELEVANT BUILDING PERMITS. COPY OF BUILDING PERMIT TO BE PROVIDED TO PRINCIPAL.
- CONTRACTOR TO PROVIDE STRUCTURAL ENGINEER INSPECTION AND CERTIFICATION FOR CONSTRUCTION OF ALL WALLS, IRRESPECTIVE OF NEED FOR PERMIT OR OTHERWISE.
- CONTRACTOR TO ENSURE ALL REQUIREMENTS OF BUILDING PERMIT HAVE BEEN ADDRESSED.

ALIGNMENT RWD

Point no	Easting	Northing	RL
RWD1	323283.917	5844492.821	250.662
RWD2	323283.549	5844489.844	250.540
RWD3	323286.159	5844486.499	249.997
RWD4	323310.971	5844483.438	250.307
RWD5	323317.546	5844482.627	250.420
RWD6	323318.035	5844486.596	251.081



RETAINING WALL RWD - LONGITUDINAL SECTION

AS CONSTRUCTED PLANS

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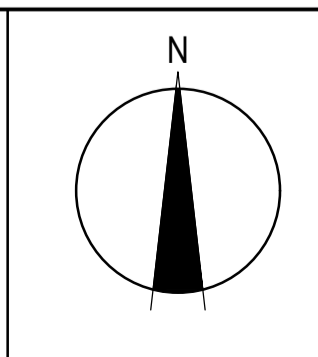
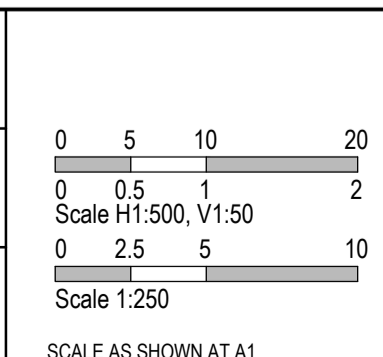
Quality Management ISO 9001

OHS Management AS/NZS 4801

Environmental Management ISO 14001

PLAN OF SUB. NO. PS900888F
PERMIT REF. NO. 719067

AS CONSTRUCTED



SMEC

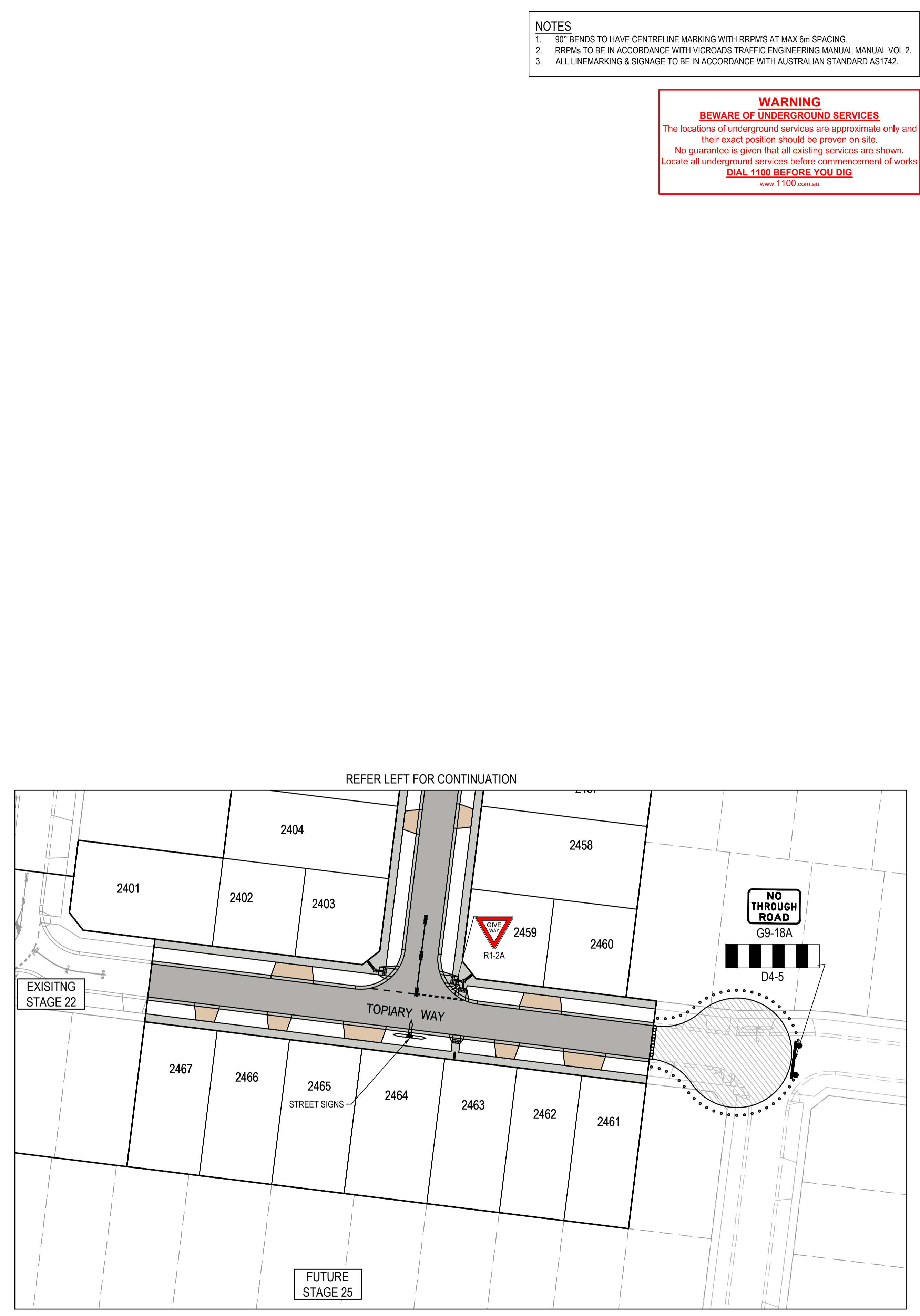
Member of the **Surbana Jurong Group**

Collins Square, Tower 4, Level 20, 727 Collins St
Melbourne, VIC, 3008, Australia
03 9514 1500



Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Retaining Wall Longitudinal Sections - 2

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-133	SHEET No. 05 of 27	REVISION 2
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- NOTES**
- 90° BENDS TO HAVE CENTRELINE MARKING WITH RRPMS AT MAX 6m SPACING.
 - RRPMs TO BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL VOL 2.
 - ALL LINEMARKING & SIGNAGE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1742.

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

AS CONSTRUCTED PLANS

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			PLAN OF SUB. NO. PS900888F
			PERMIT REF. NO. 719067
AS CONSTRUCTED			

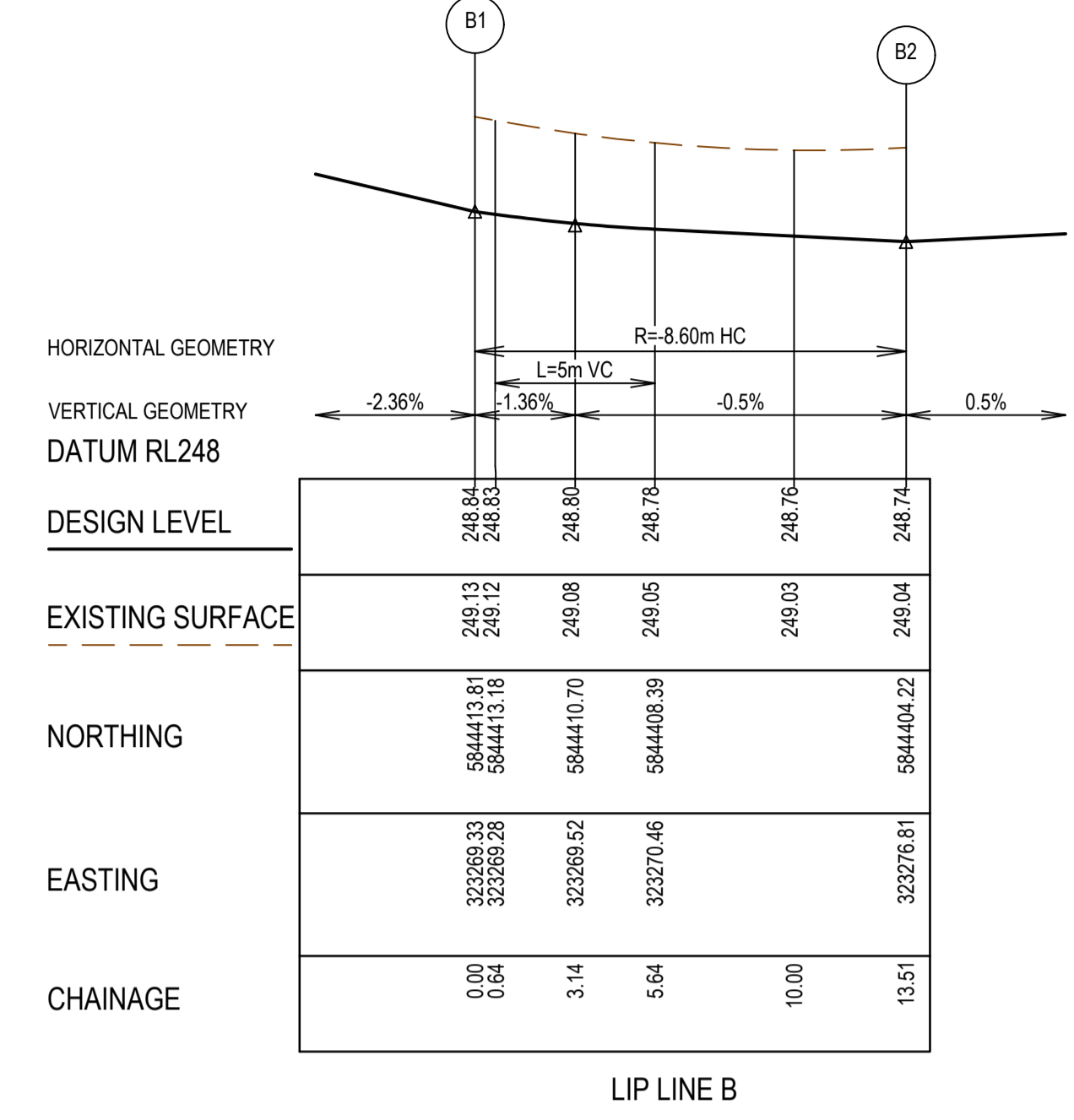
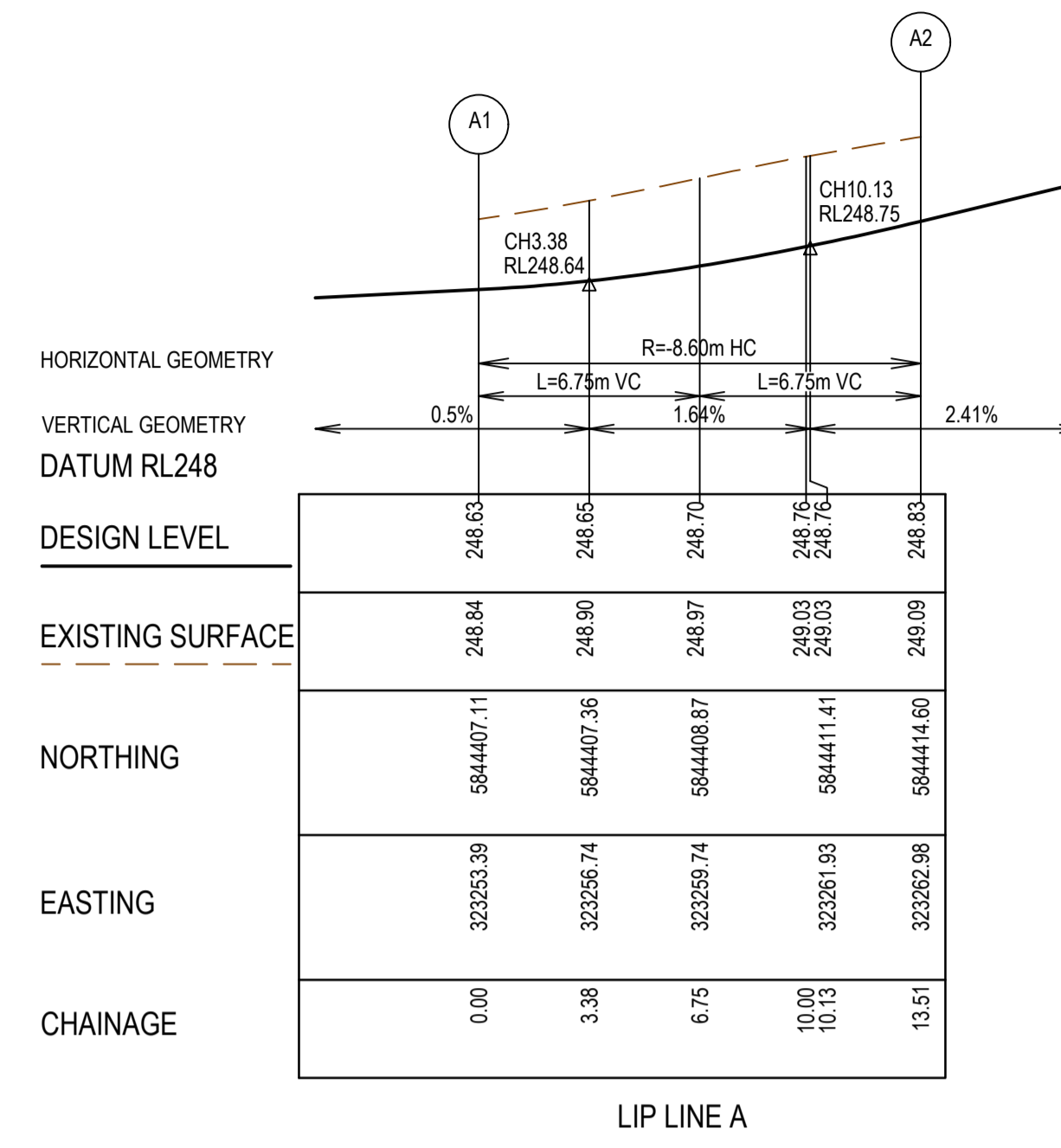
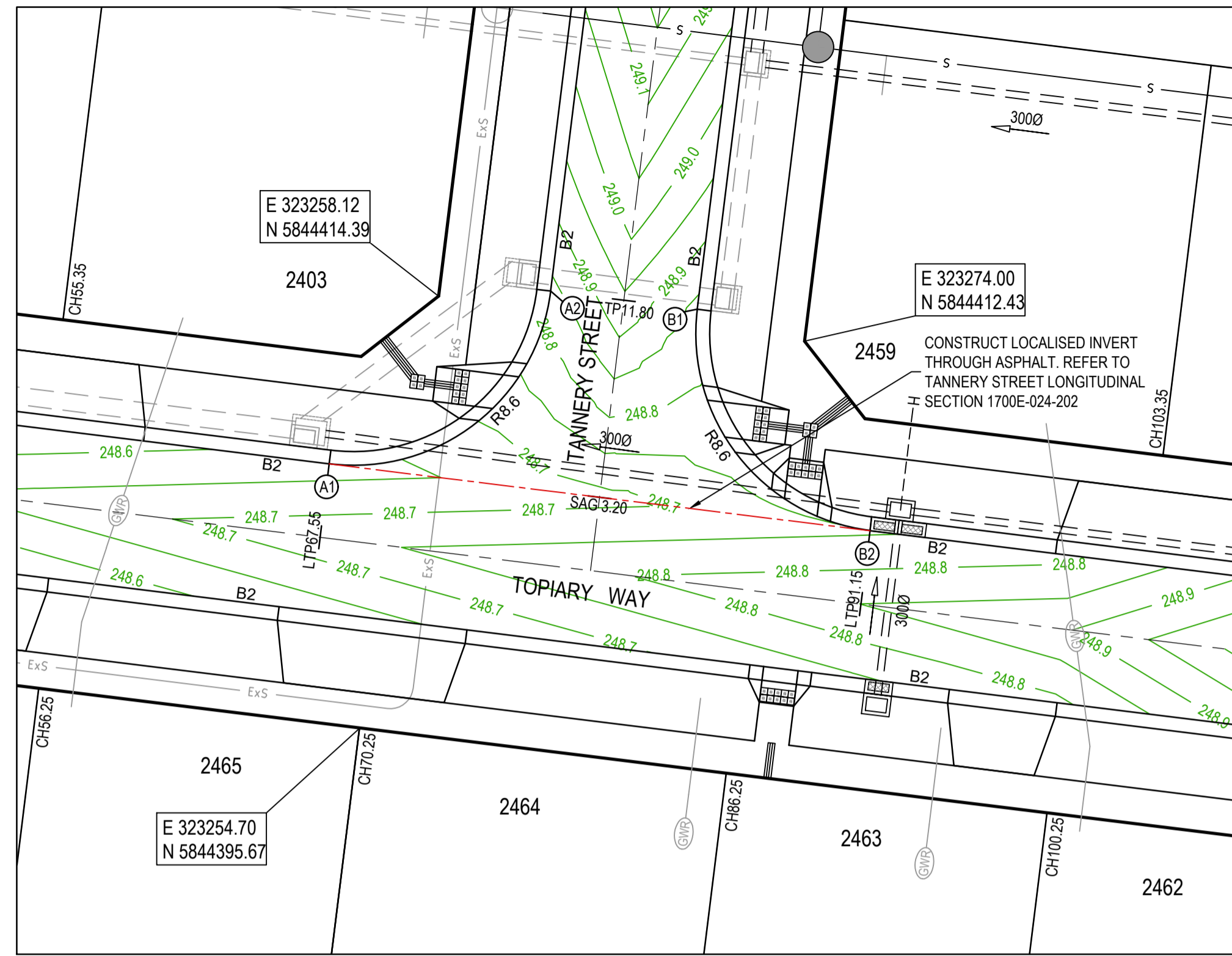
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 SCALE AS SHOWN AT A1

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

Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Signage & Linemarking Plan

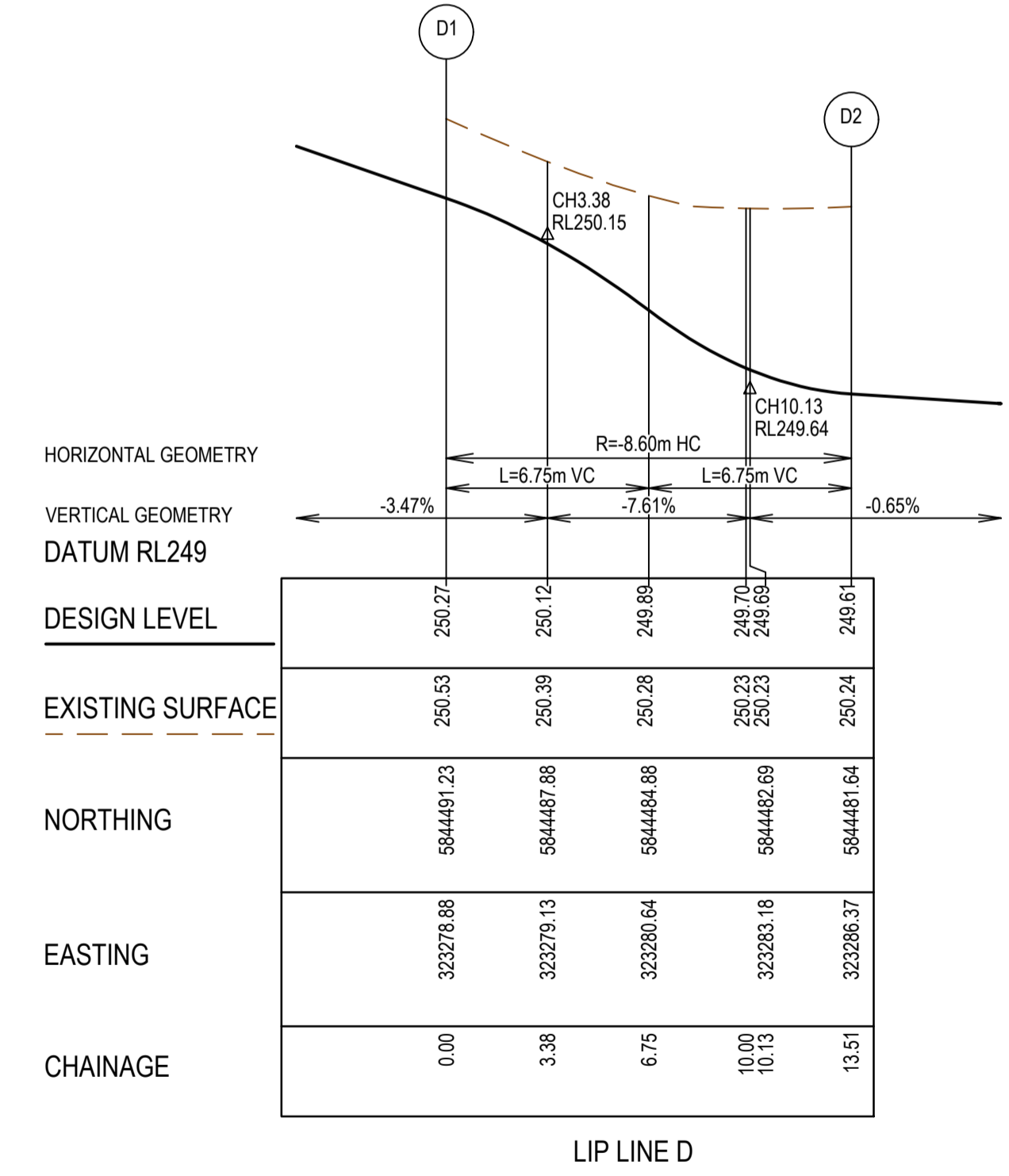
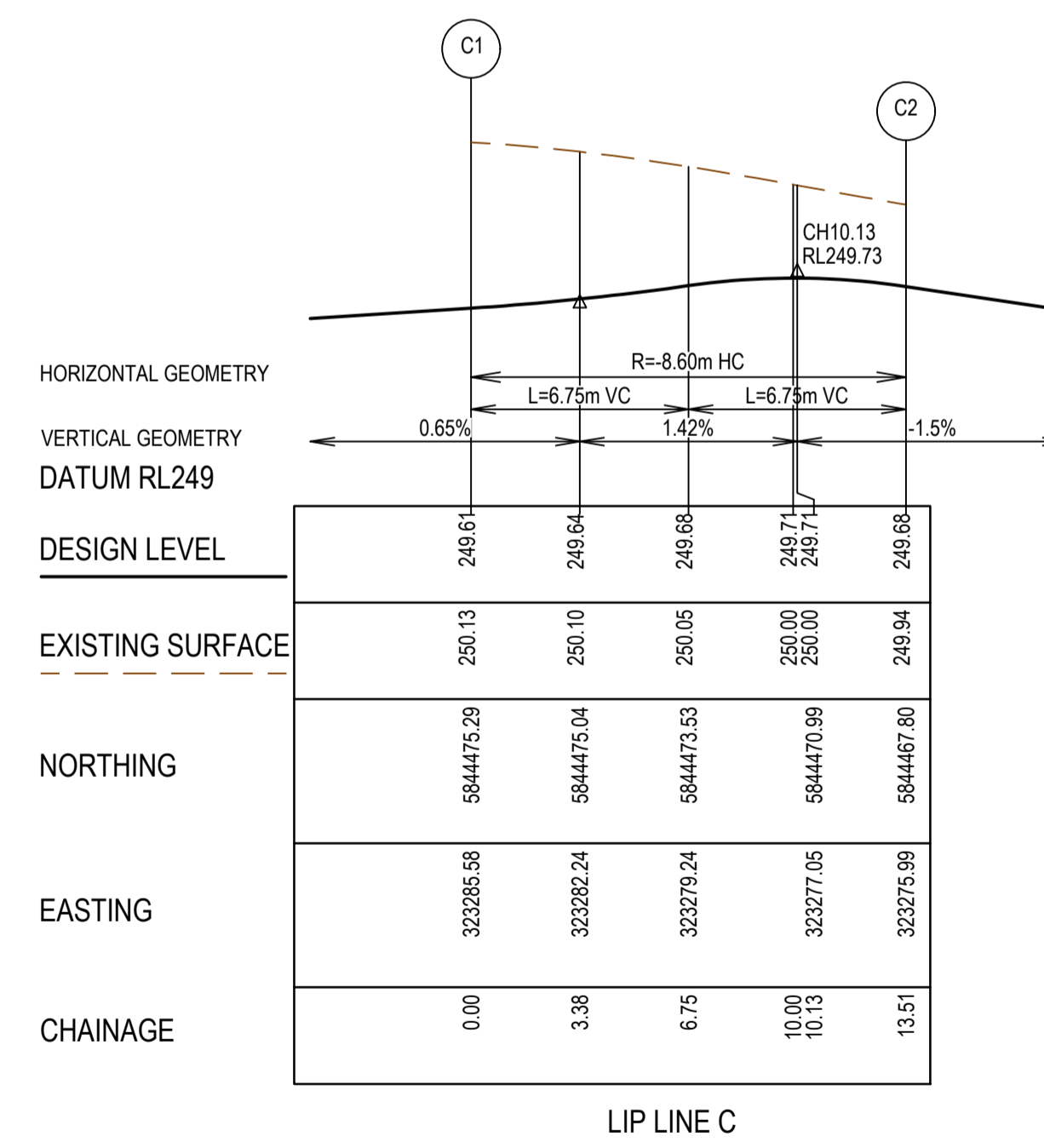
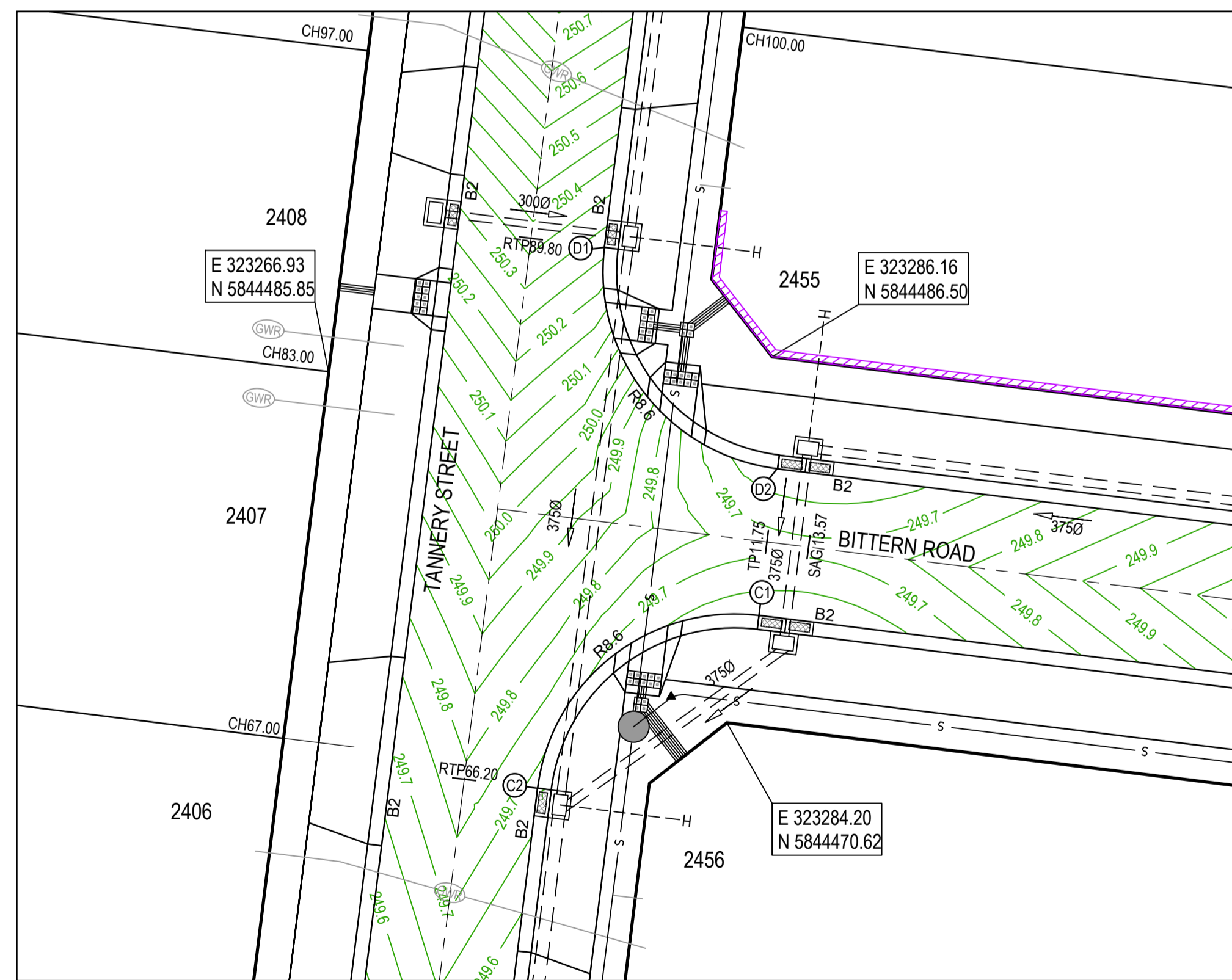
MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-171	SHEET No. 06 of 27	REVISION 2
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- NOTES**
1. ALL VEHICLE CROSSINGS AND PRAM CROSSINGS TO BE MINIMUM OF 0.75m FROM PITS.
 2. ALL PRAM CROSSINGS TO BE MINIMUM OF 2.0m FROM VEHICLE CROSSINGS.
 3. VEHICLE EXCLUSION MEASURES BETWEEN ROAD RESERVE AND RESERVE TO FORM PART OF THE LANDSCAPE WORKS.



LEGEND - INTERSECTION DETAIL PLAN
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY

	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	EXISTING RETAINING WALL
	RETAINING WALL
	FUTURE RETAINING WALL
	EDGE STRIP, SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH



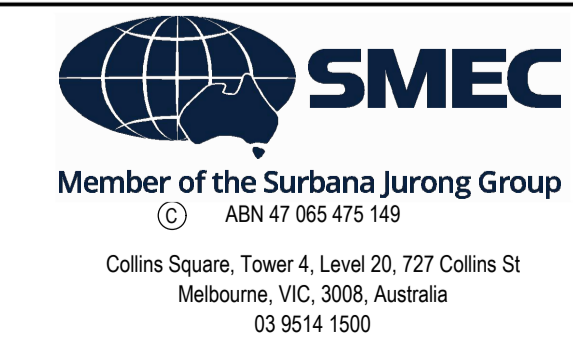
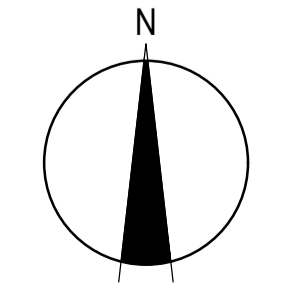
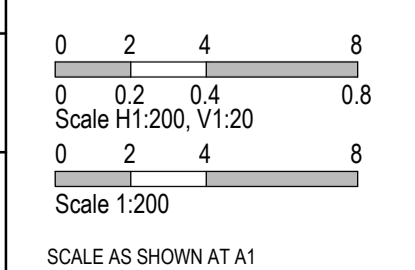
AS CONSTRUCTED PLANS

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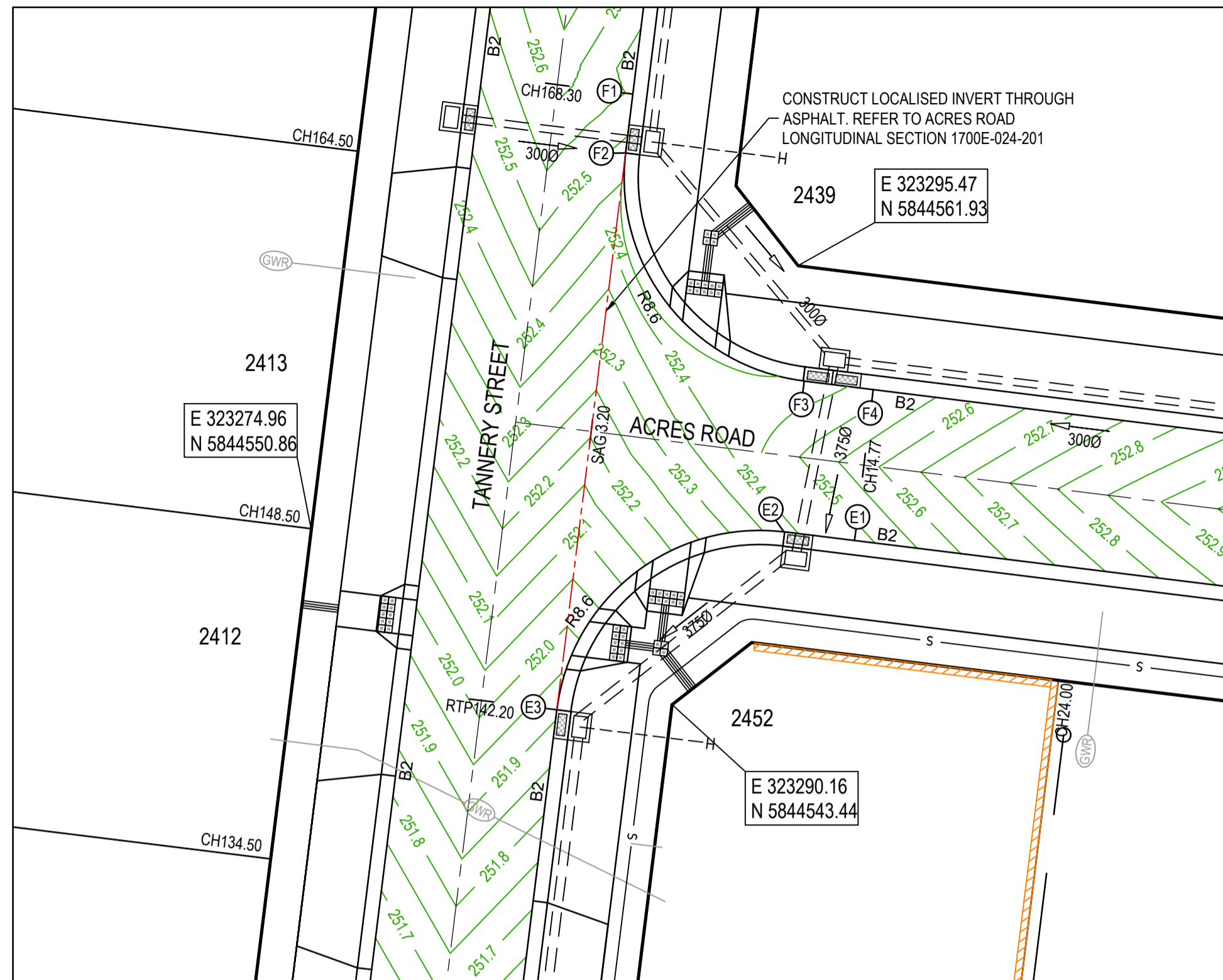
PLAN OF SUB. NO.
PS900888F
PERMIT REF. NO.
719067

AS CONSTRUCTED

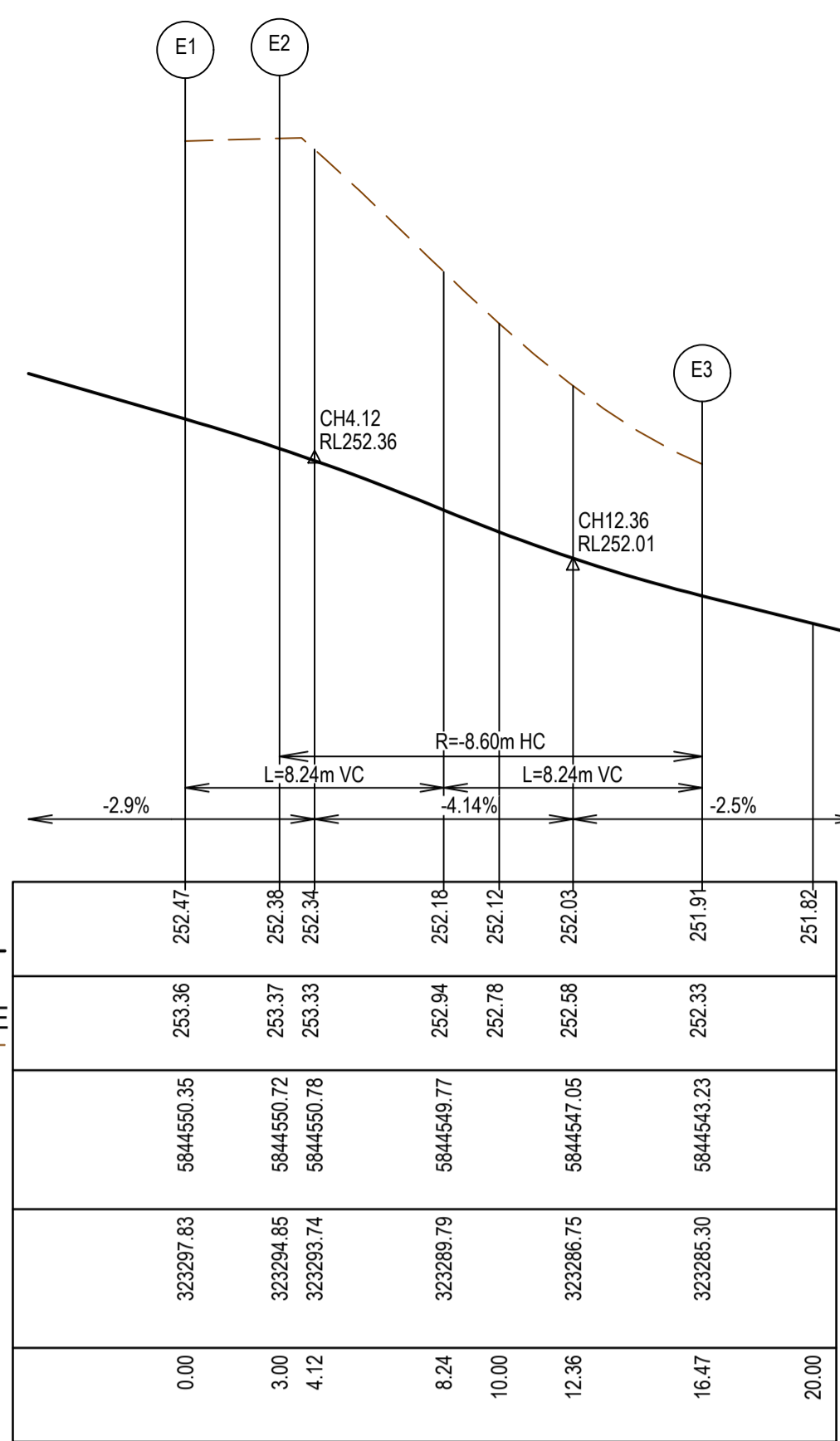


Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Intersection Detail Plan - 1

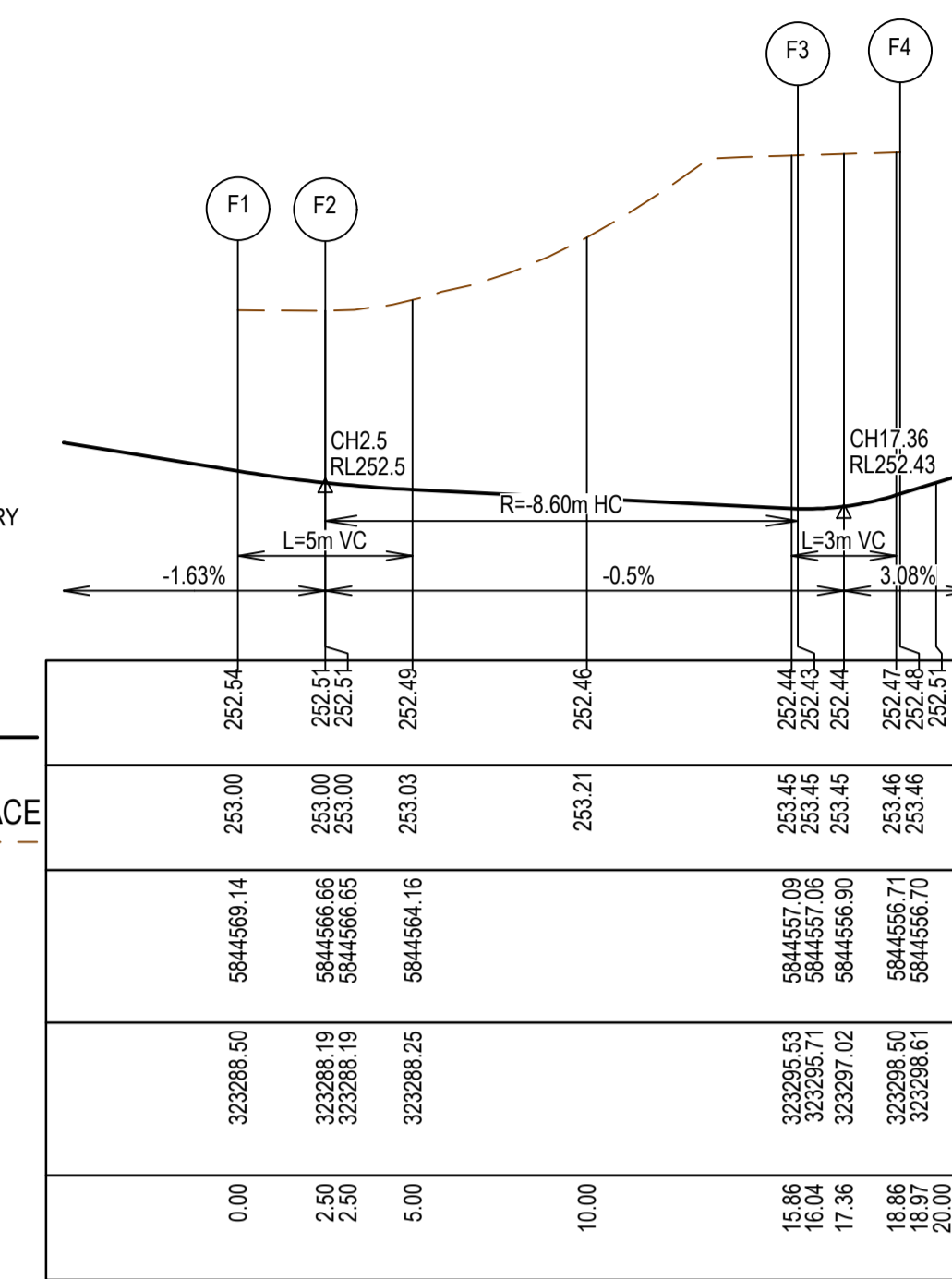
MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-181	SHEET No. 07 of 27	REVISION 2
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HORIZONTAL GEOMETRY
 VERTICAL GEOMETRY
 DATUM RL251
 DESIGN LEVEL
 EXISTING SURFACE
 NORTHING
 EASTING
 CHAINAGE



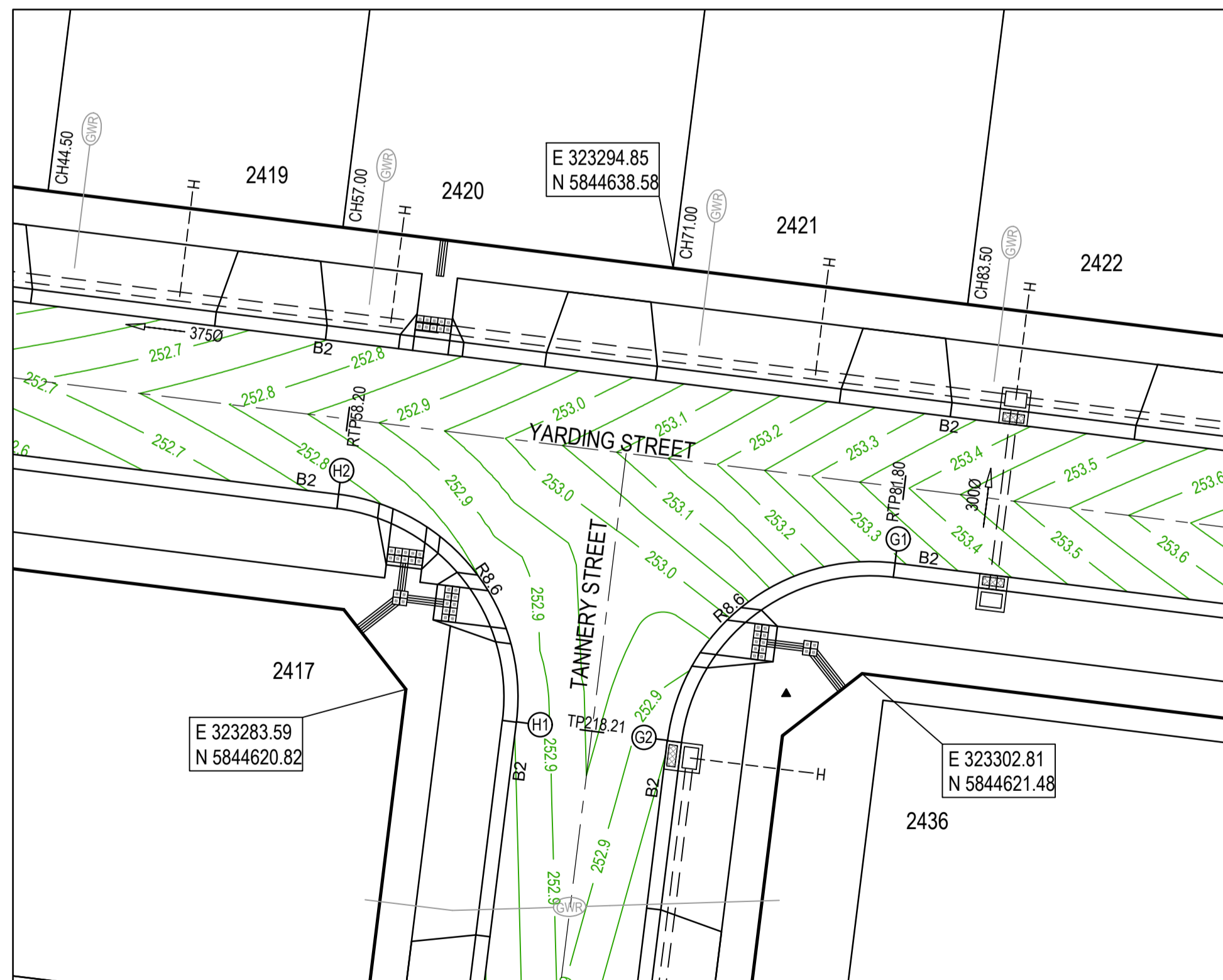
HORIZONTAL GEOMETRY
 VERTICAL GEOMETRY
 DATUM RL252
 DESIGN LEVEL
 EXISTING SURFACE
 NORTHING
 EASTING
 CHAINAGE



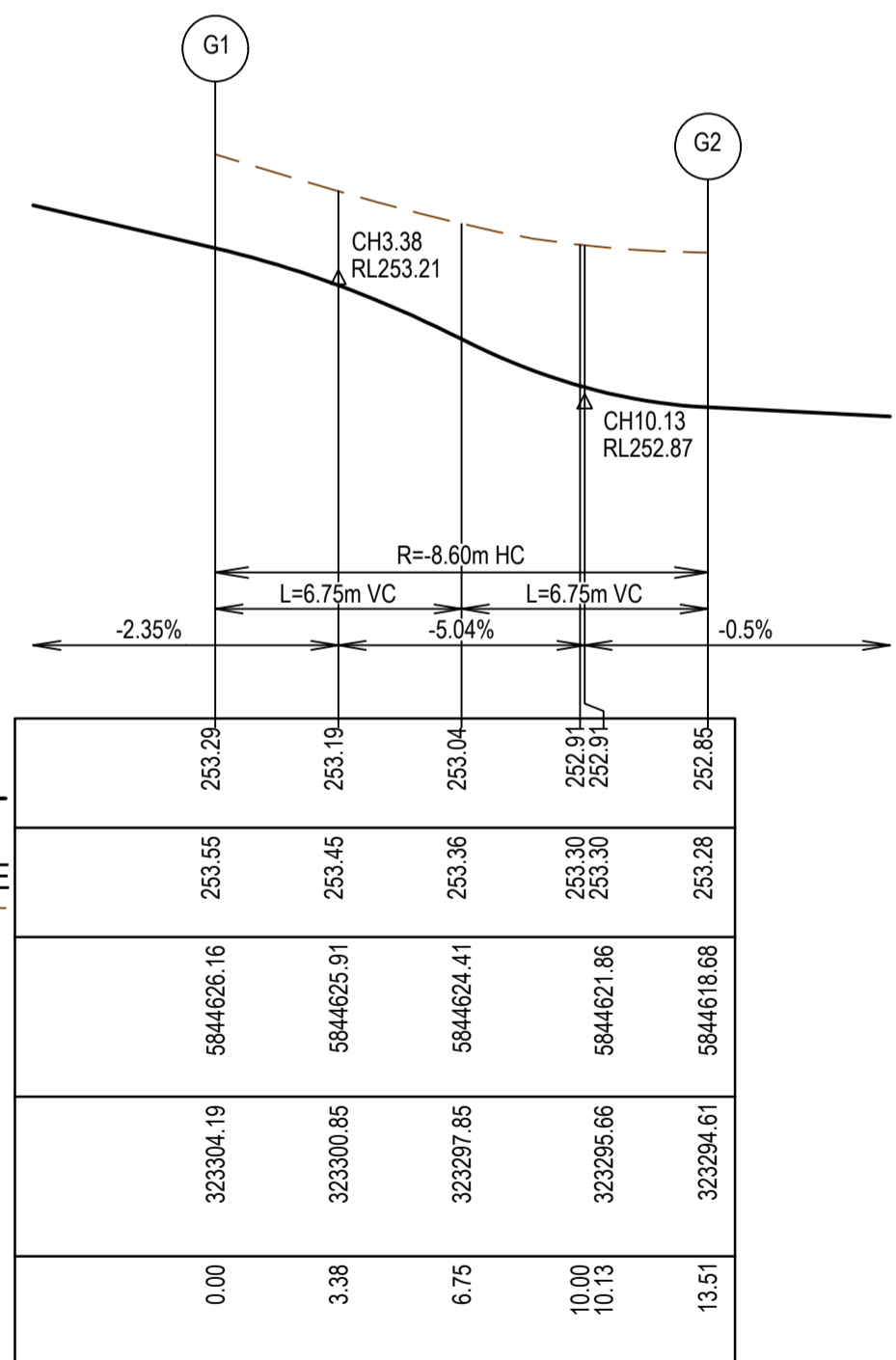
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LEGEND - INTERSECTION DETAIL PLAN
 ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY

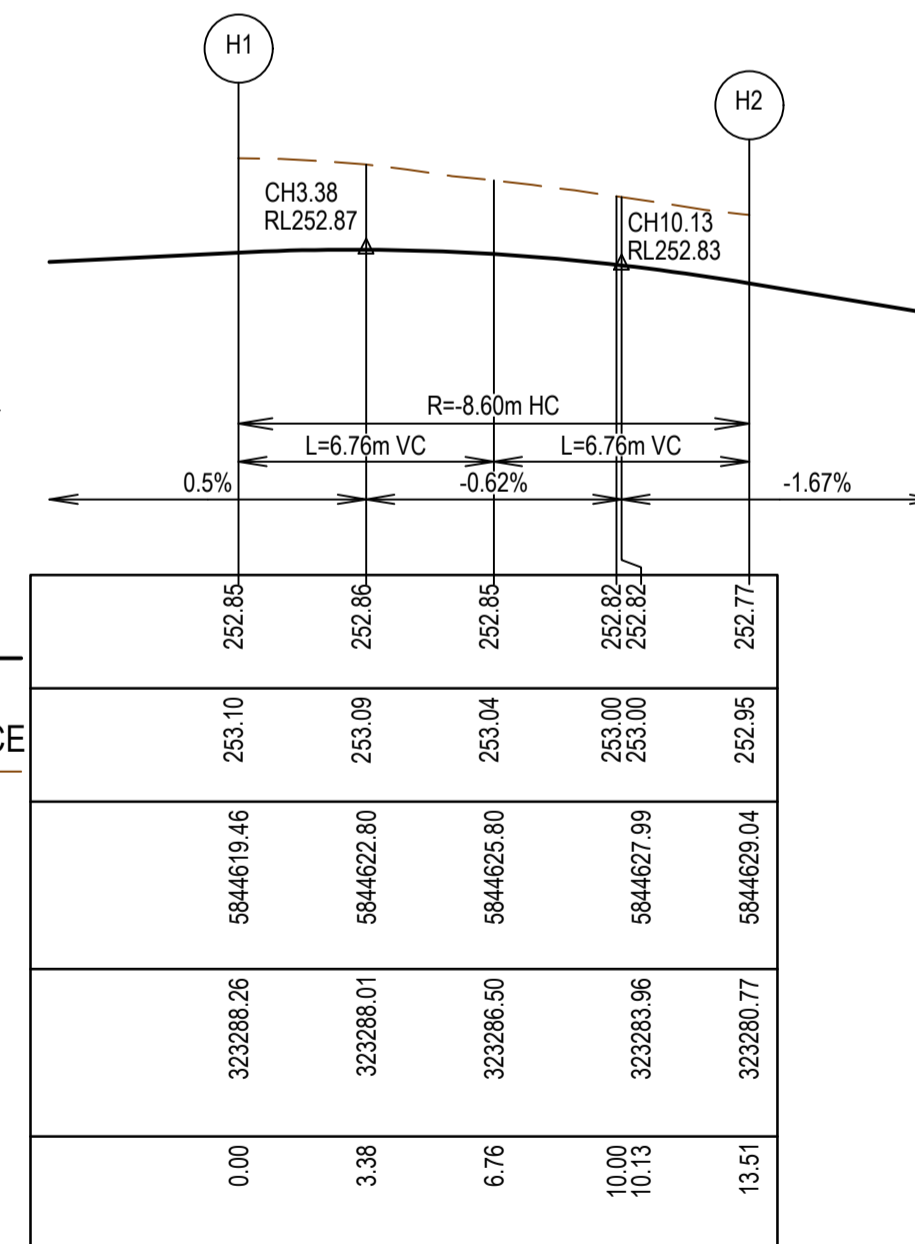
	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	FUTURE RETAINING WALL
	RETAINING WALL
	EDGE STRIP, SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH



HORIZONTAL GEOMETRY
 VERTICAL GEOMETRY
 DATUM RL252
 DESIGN LEVEL
 EXISTING SURFACE
 NORTHING
 EASTING
 CHAINAGE



HORIZONTAL GEOMETRY
 VERTICAL GEOMETRY
 DATUM RL252
 DESIGN LEVEL
 EXISTING SURFACE
 NORTHING
 EASTING
 CHAINAGE



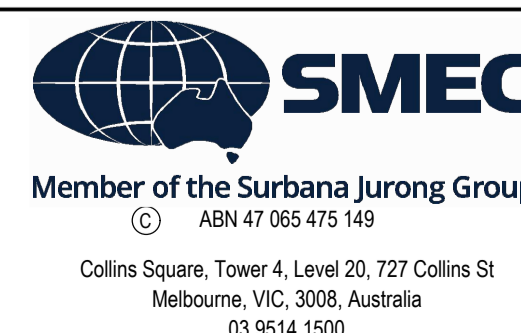
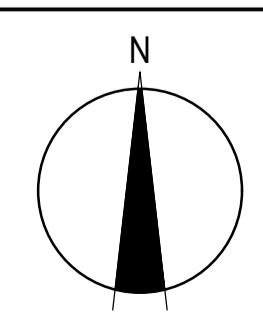
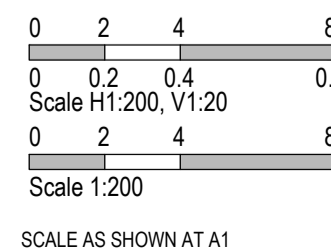
AS CONSTRUCTED PLANS

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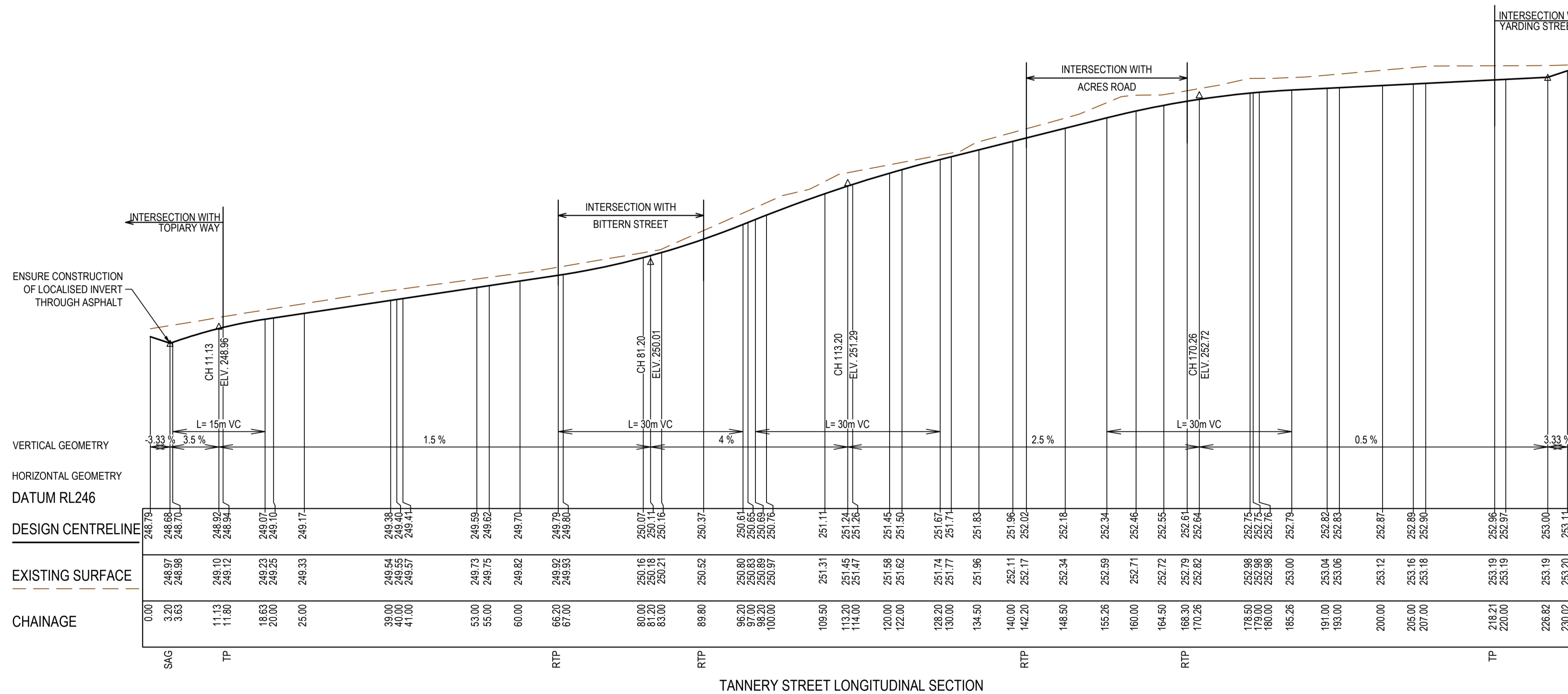
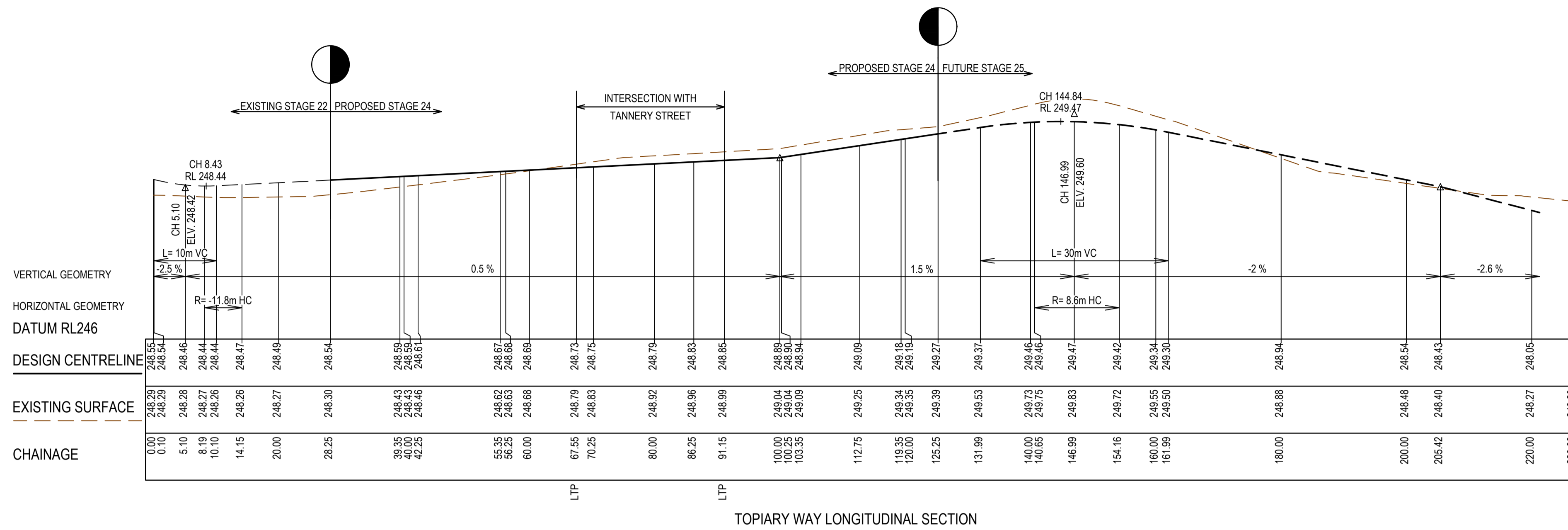
PLAN OF SUB. NO.
 PS900888F
 PERMIT REF. NO.
 719067

AS CONSTRUCTED



Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Intersection Detail Plan - 2

MELBOURNE REF 8M2	PROJECT / DRAWING No. 1700E-024-182	SHEET No. 08 of 27	REVISION 1
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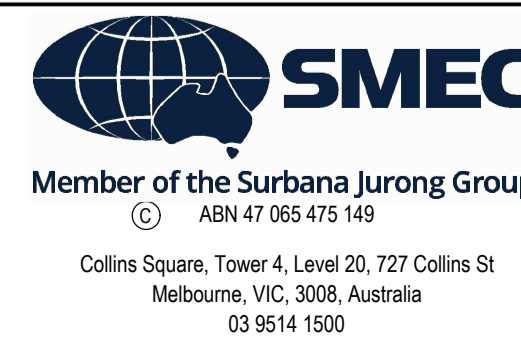
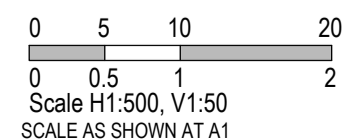
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AS CONSTRUCTED

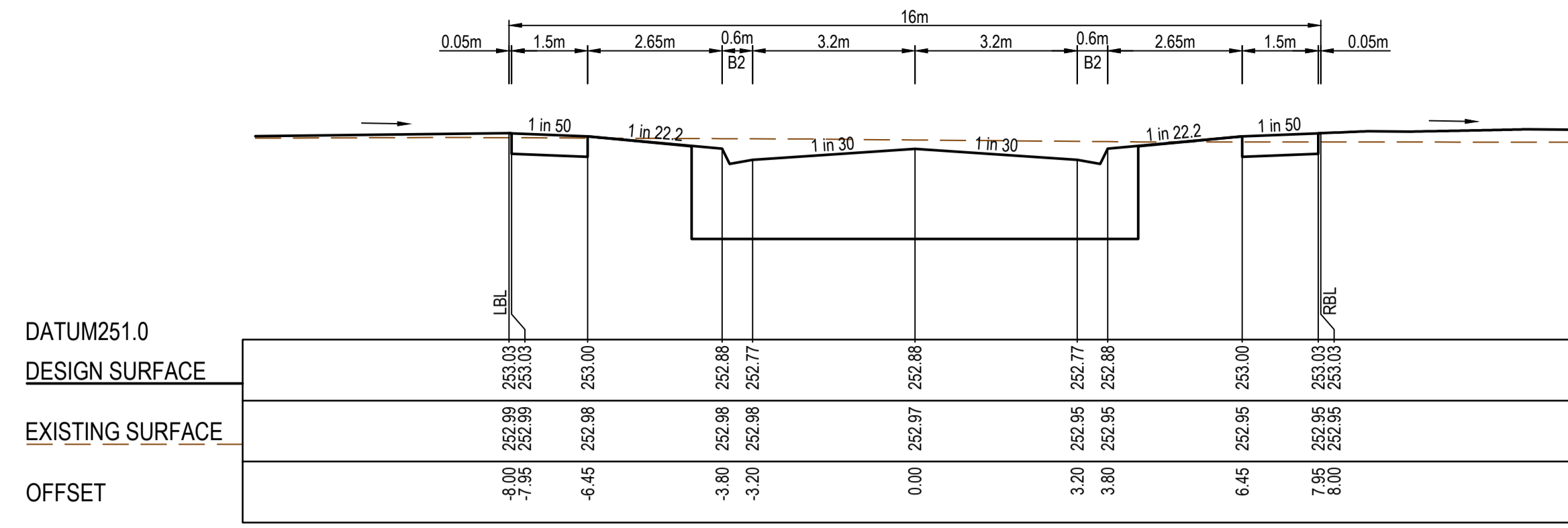
PLAN OF SUB. NO.
PS900888F
PERMIT REF. NO.
719067



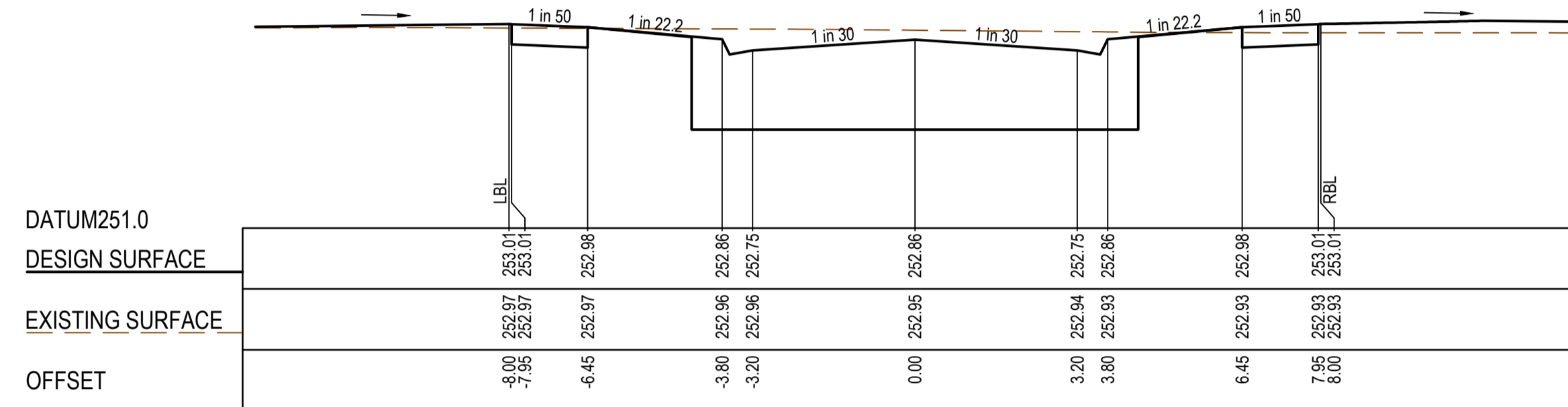
Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Longitudinal Sections - 2

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-202	SHEET No. 10 of 27	REVISION 2
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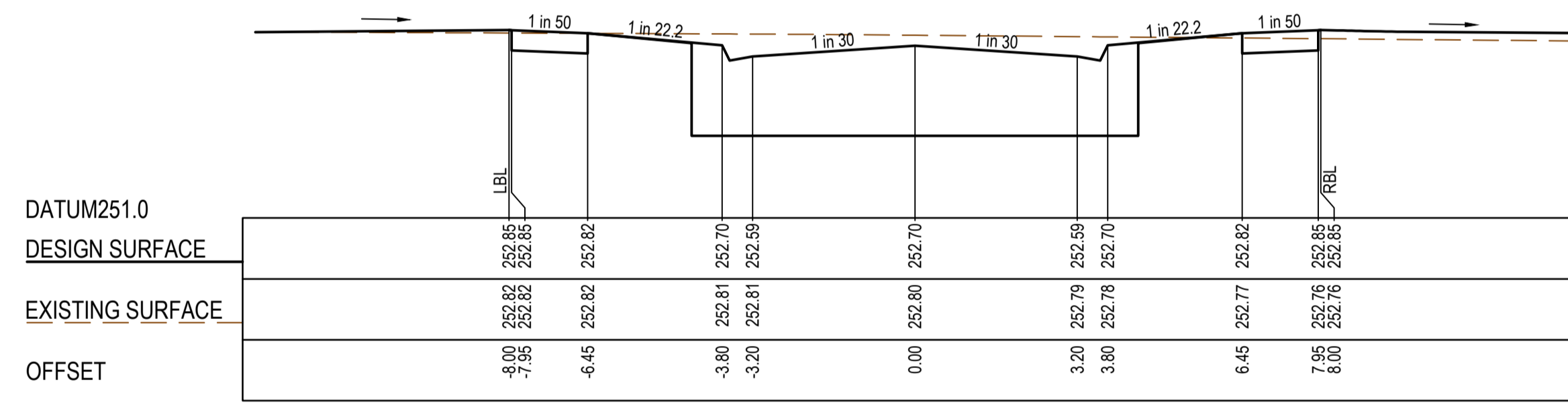
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



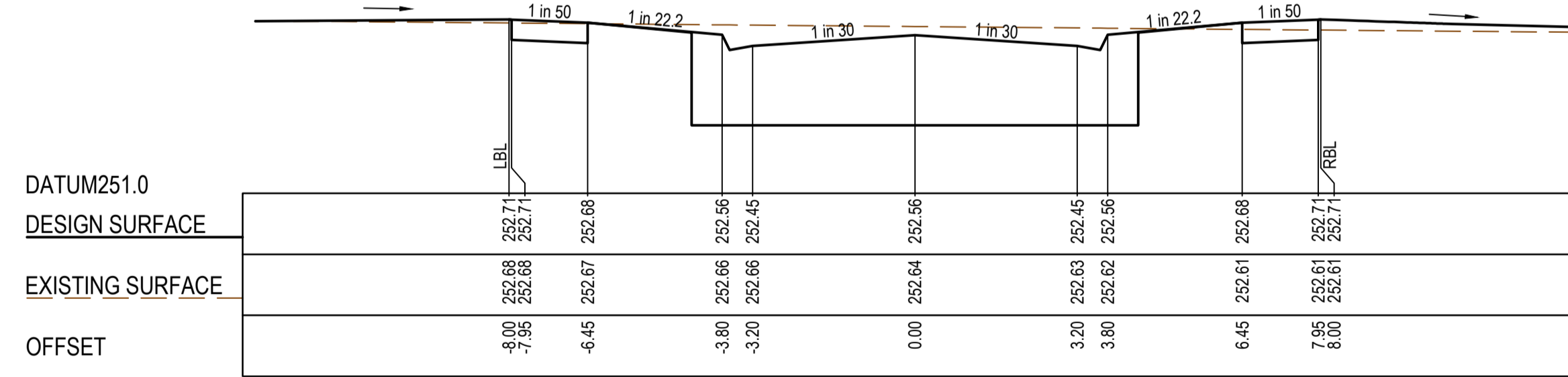
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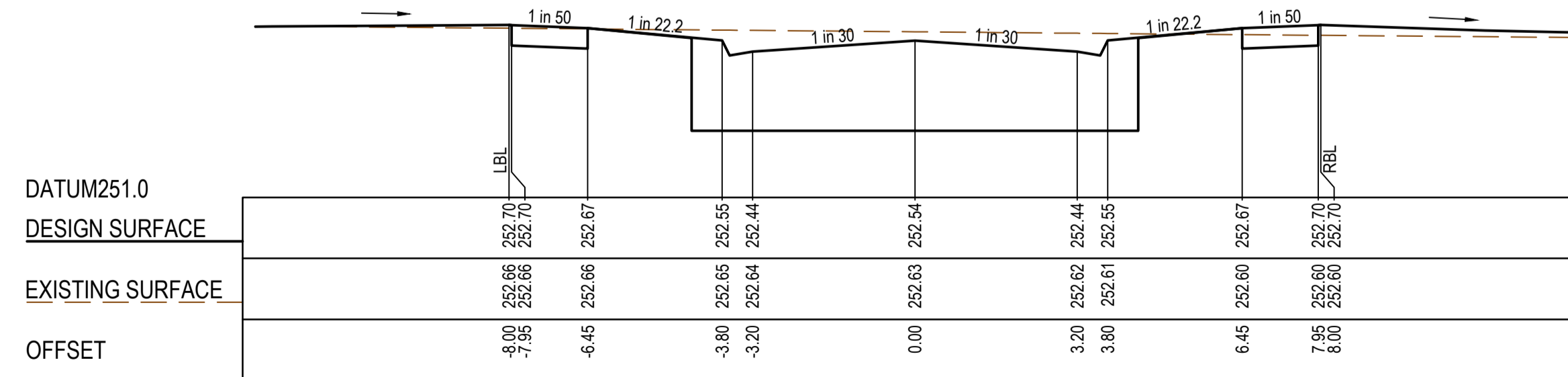
CH 57.00



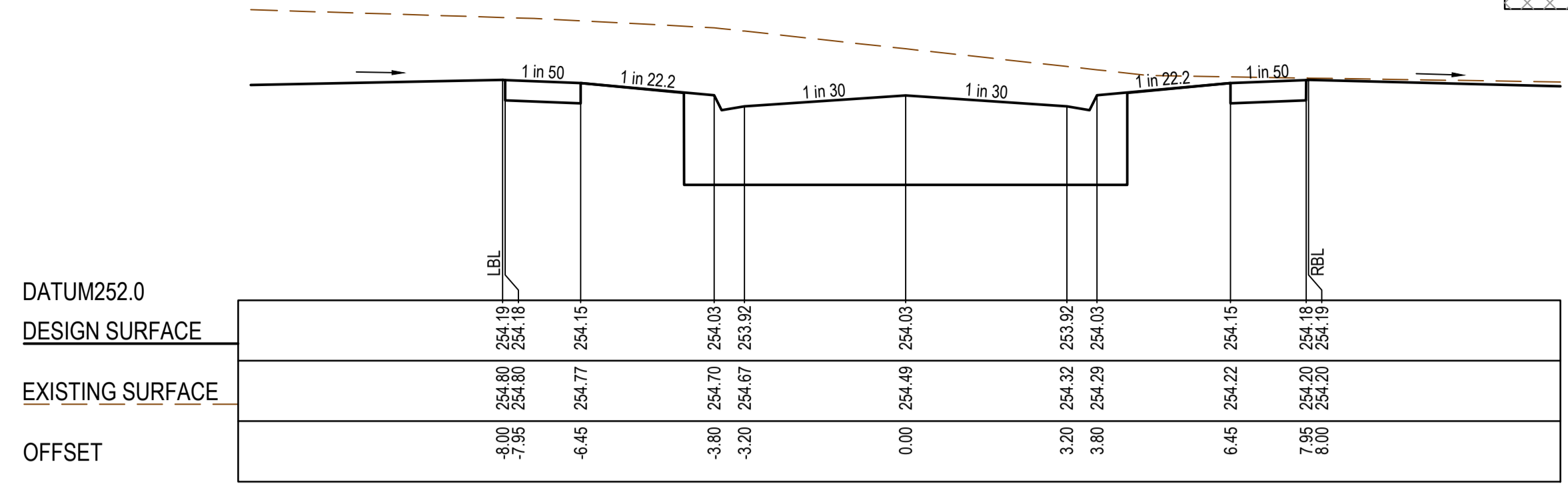
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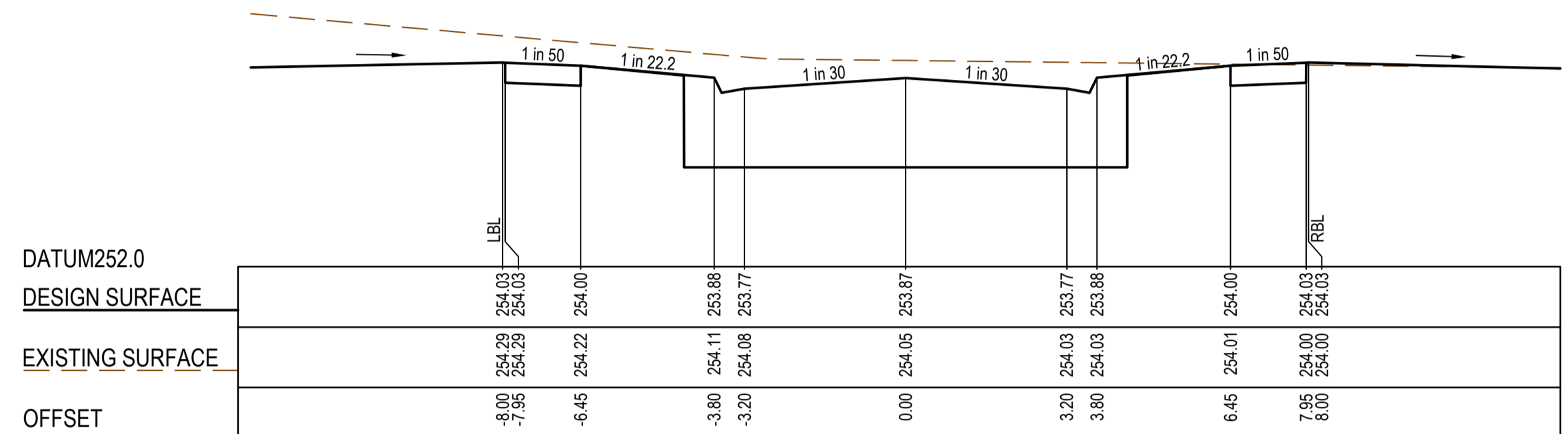
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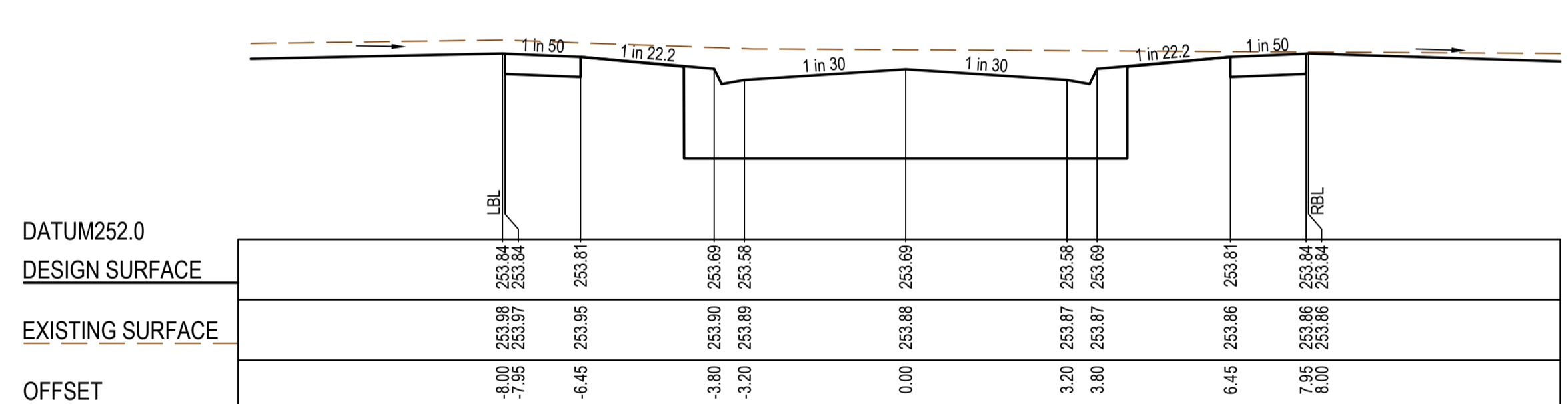
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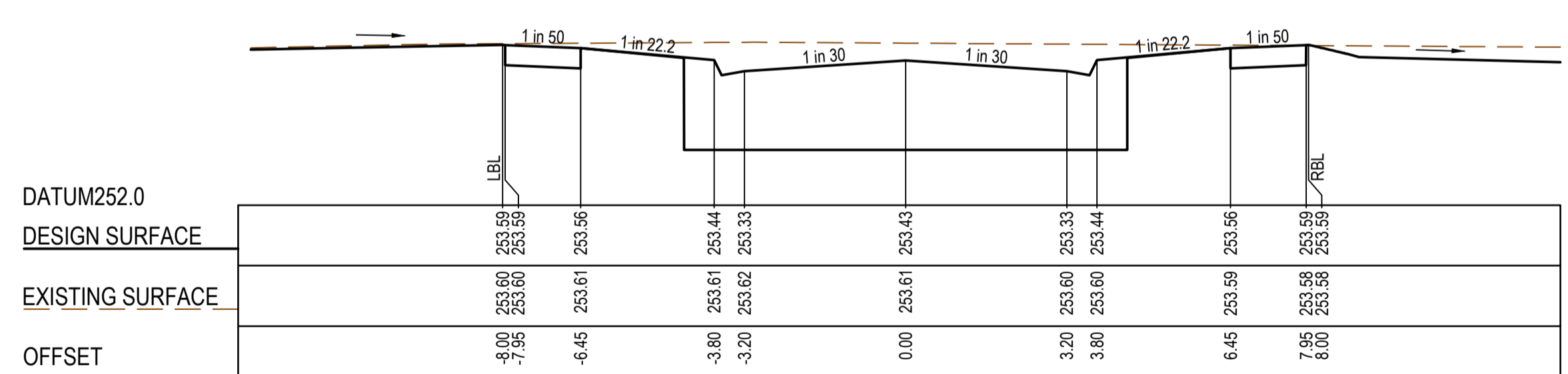
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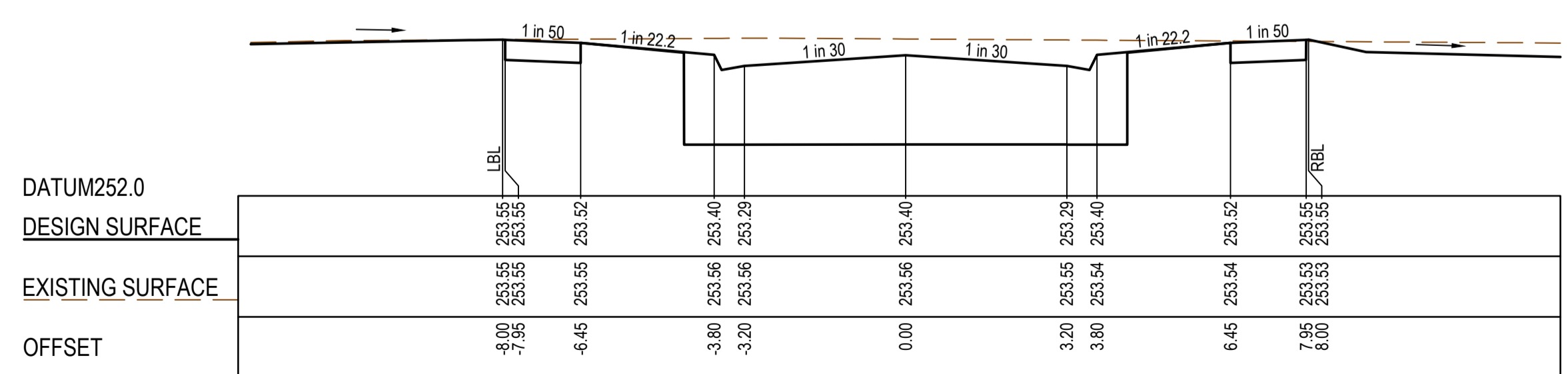
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CH 96.00



CH 83.50



RTPCH 81.80

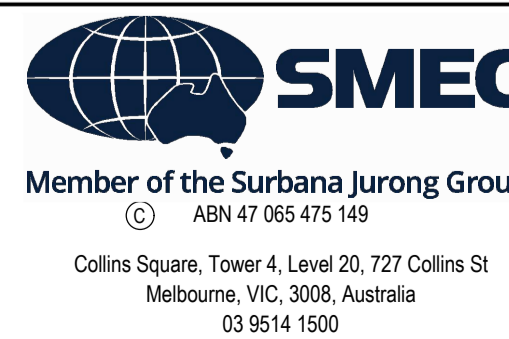
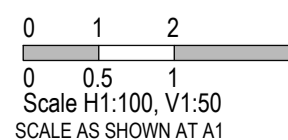
AS CONSTRUCTED PLANS

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AS CONSTRUCTED

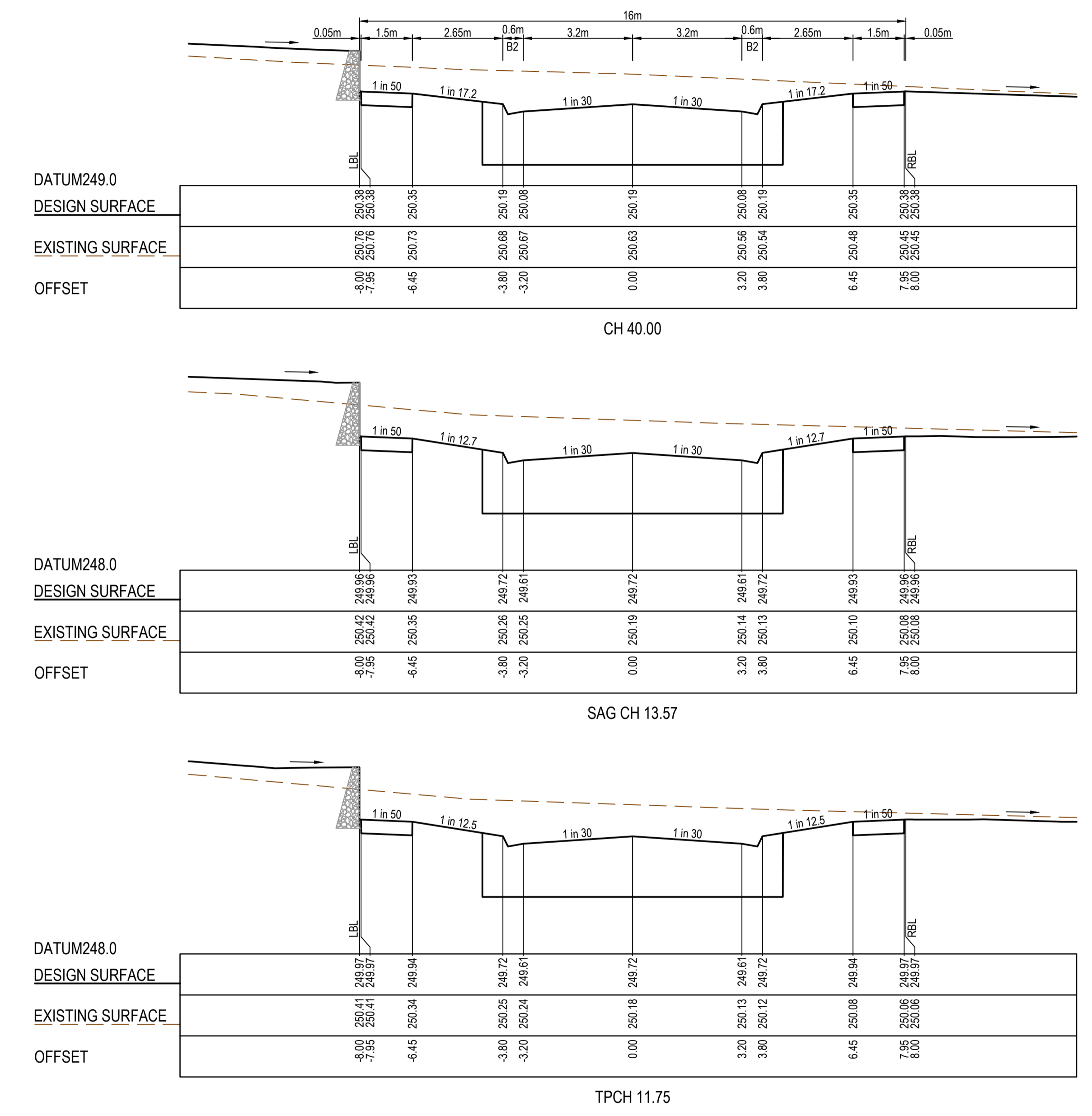
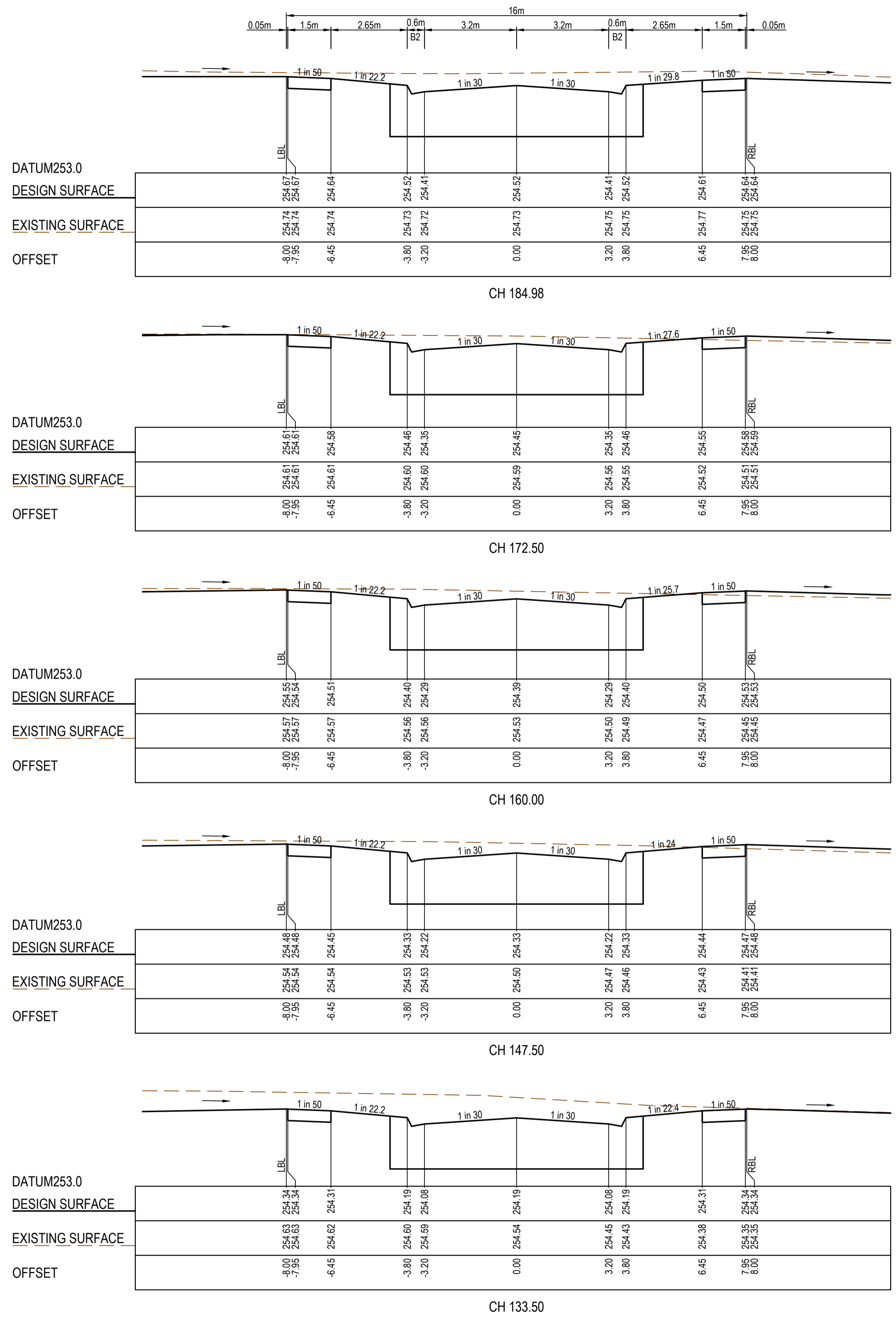
PLAN OF SUB. NO.
PS900888F
PERMIT REF. NO.
719067



Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Cross Sections: Yarding Street - 1
Ch30.00 - Ch 121.00

MELWAYS REF: 8M2 PROJECT / DRAWING No: 1700E-024-251 SHEET No: 11 of 27 REVISION: 1

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



YARDING STREET

BITTERN ROAD

AS CONSTRUCTED PLANS

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Quality Management ISO 9001
 OHS Management AS/NZS 4801
 Environmental Management ISO 14001
 Global-Mark.com.au®

PLAN OF SUB. NO. PS900888F
 PERMIT REF. NO. 719067

AS CONSTRUCTED

0 1 2 4
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 SCALE AS SHOWN AT 1

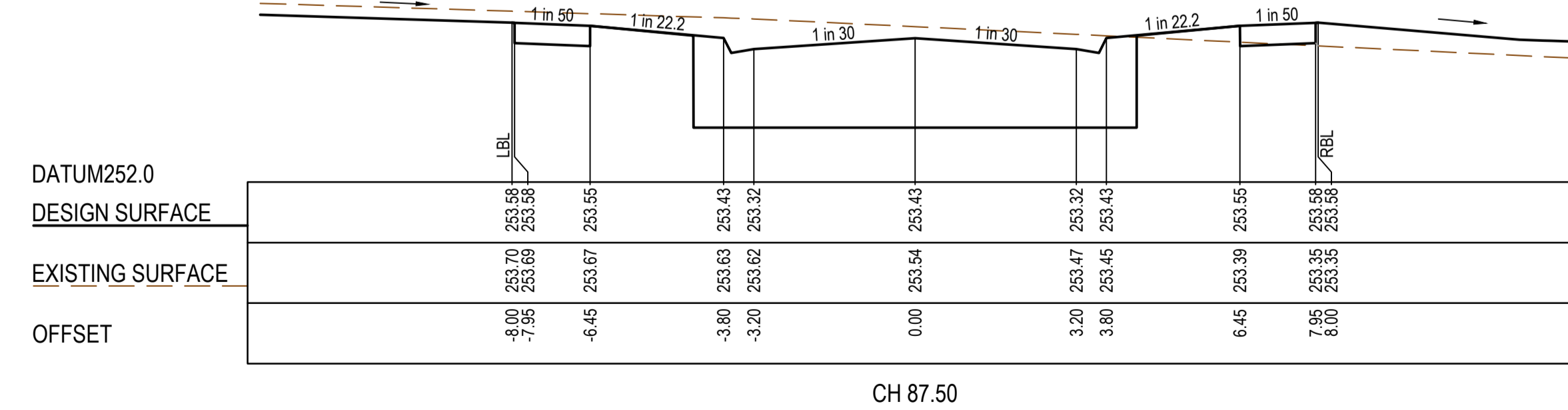
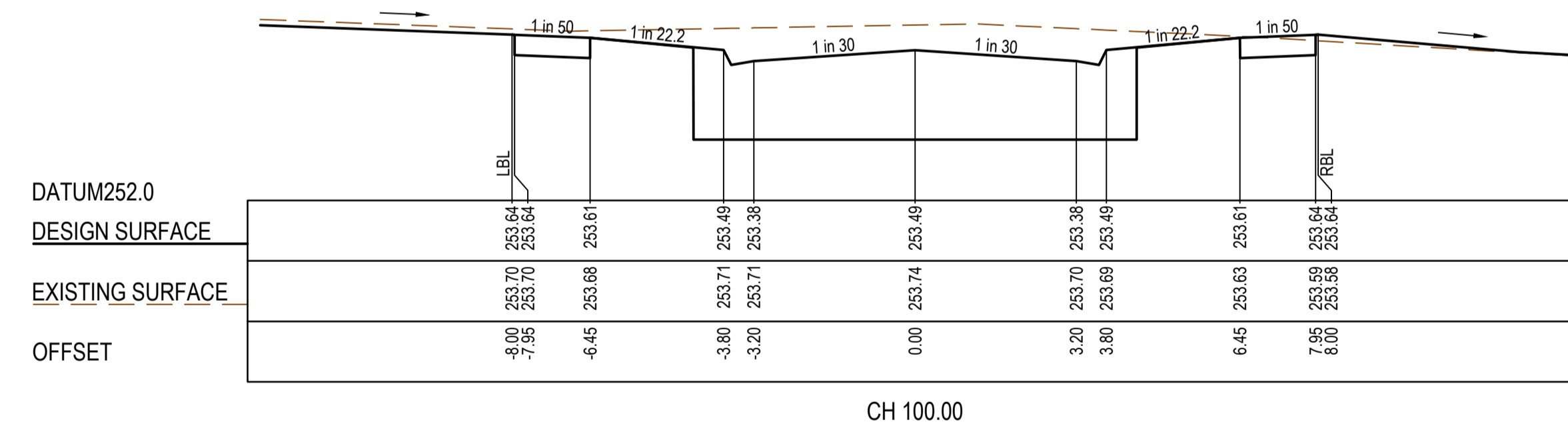
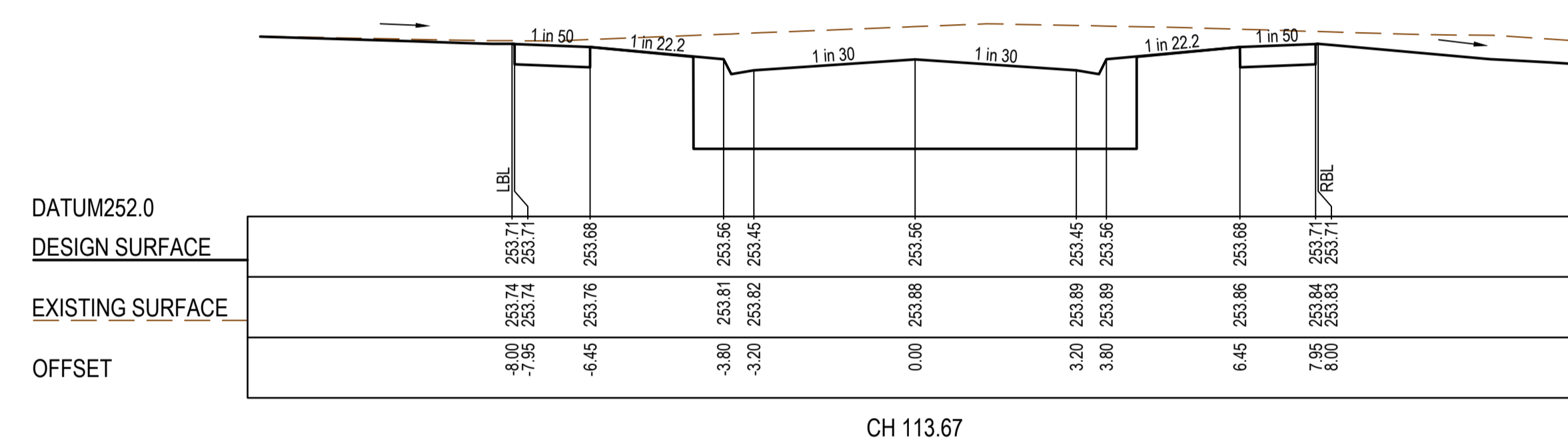
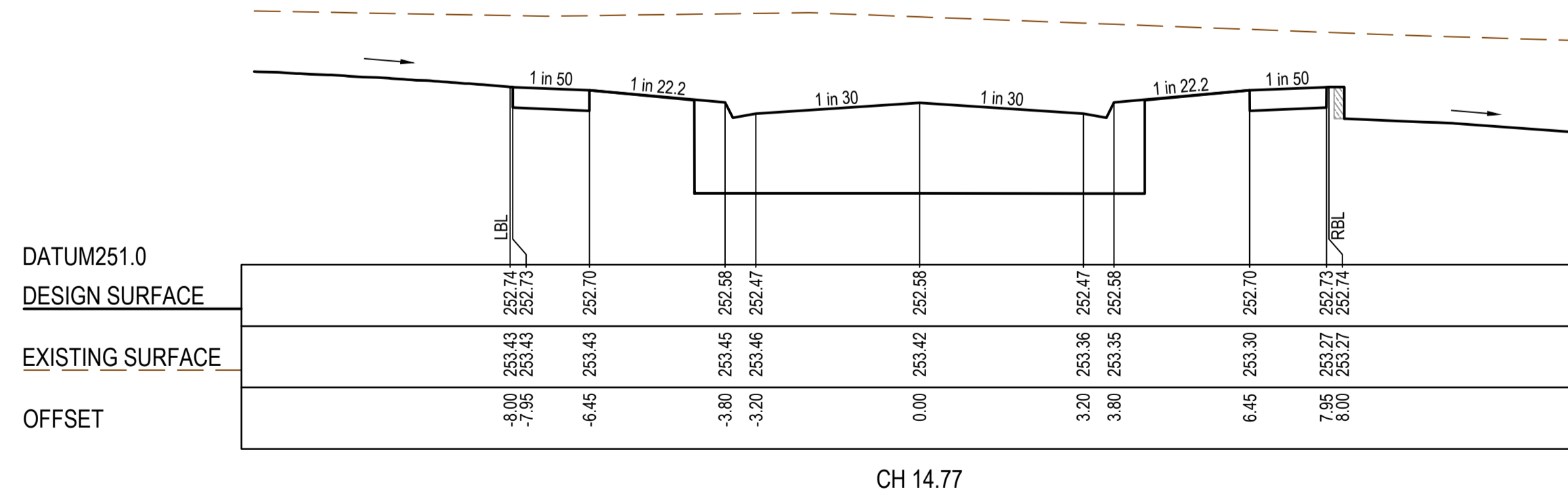
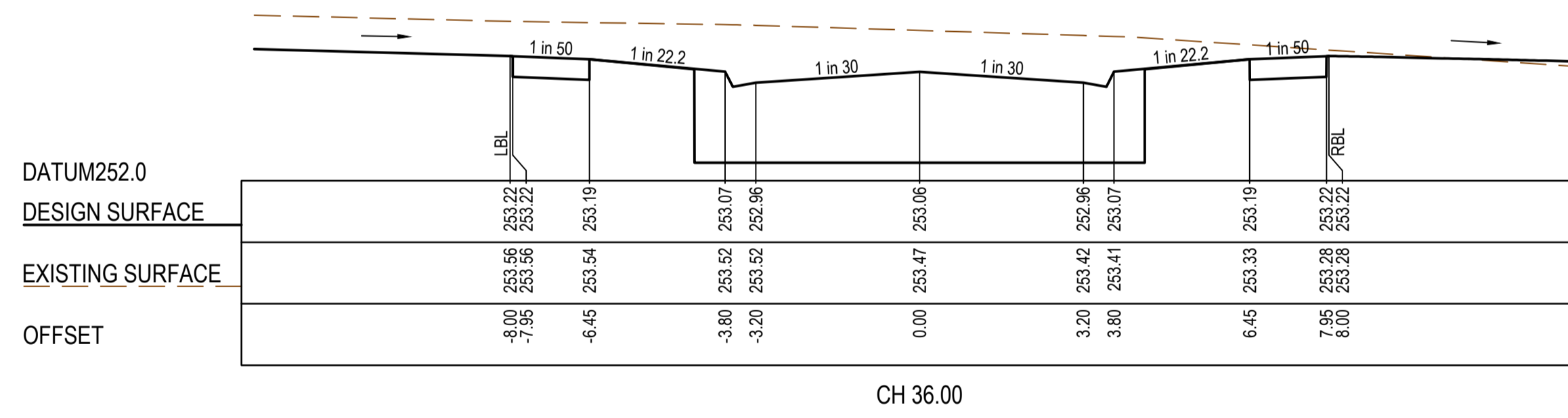
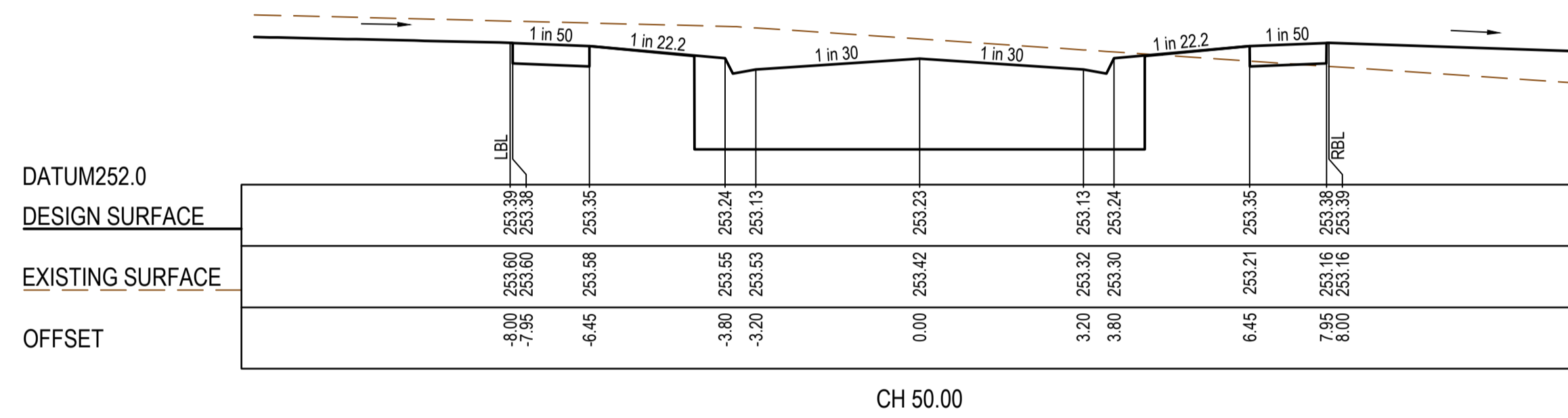
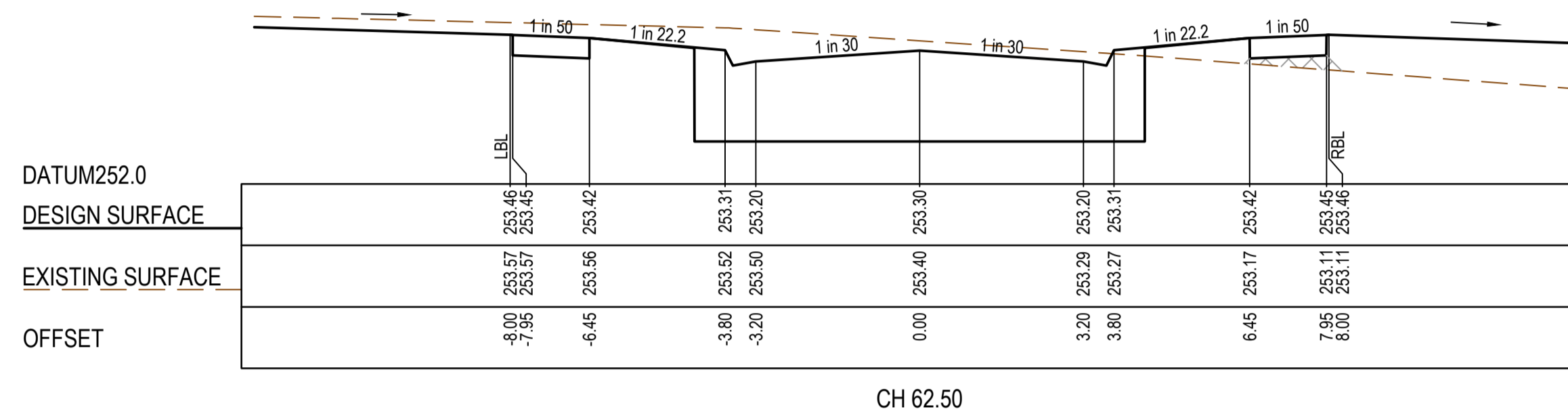
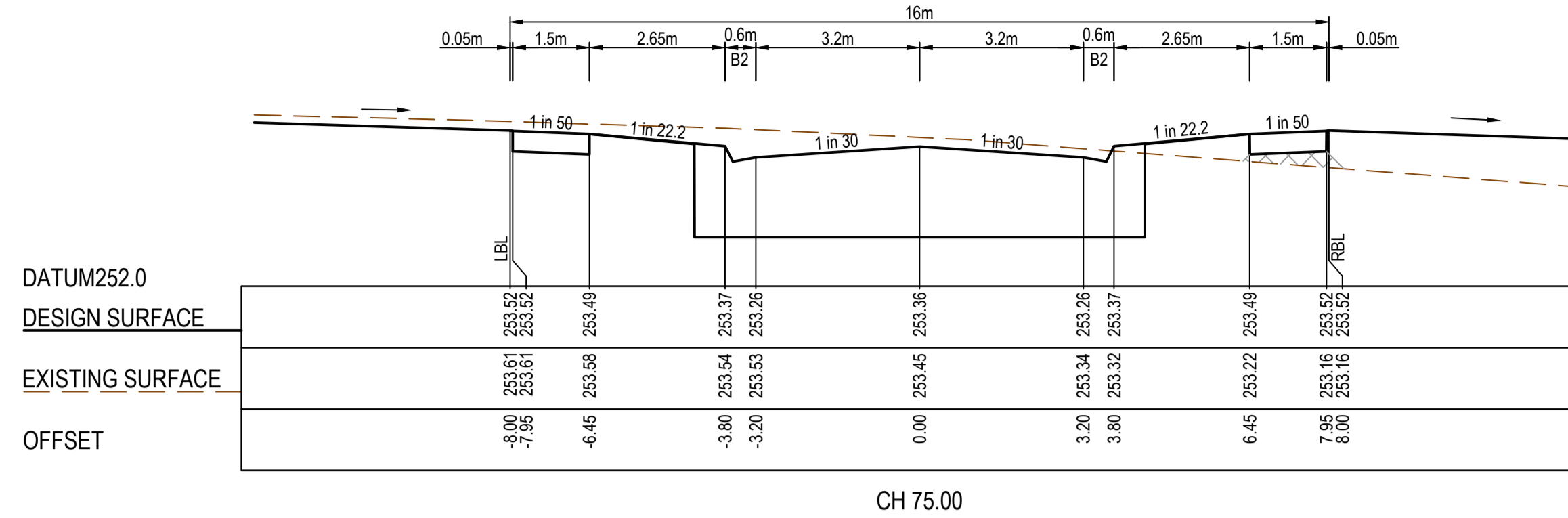
SMEC
 Member of the Surlana Jurong Group
 ABN 47 065 475 149
 Collins Square, Tower 4, Level 20, 727 Collins St
 Melbourne, VIC, 3008, Australia
 03 9514 1500

mirvac

Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Cross Sections: Yarding Street - 2
 Ch 133.50 - Ch 184.98 & Bittern Road

MELWAYS REF 8M2 PROJECT/DRAWING No. 1700E-024-252 SHEET No. 12 of 27 REVISION 1

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



AS CONSTRUCTED PLANS
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 OHS Management AS/NZS 4801
 Environmental Management ISO 14001
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PLAN OF SUB. NO.
 PS900888F
 PERMIT REF. NO.
 719067

AS CONSTRUCTED

0 1 2 4
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 Scale H1:100, V1:50
 SCALE AS SHOWN AT A1

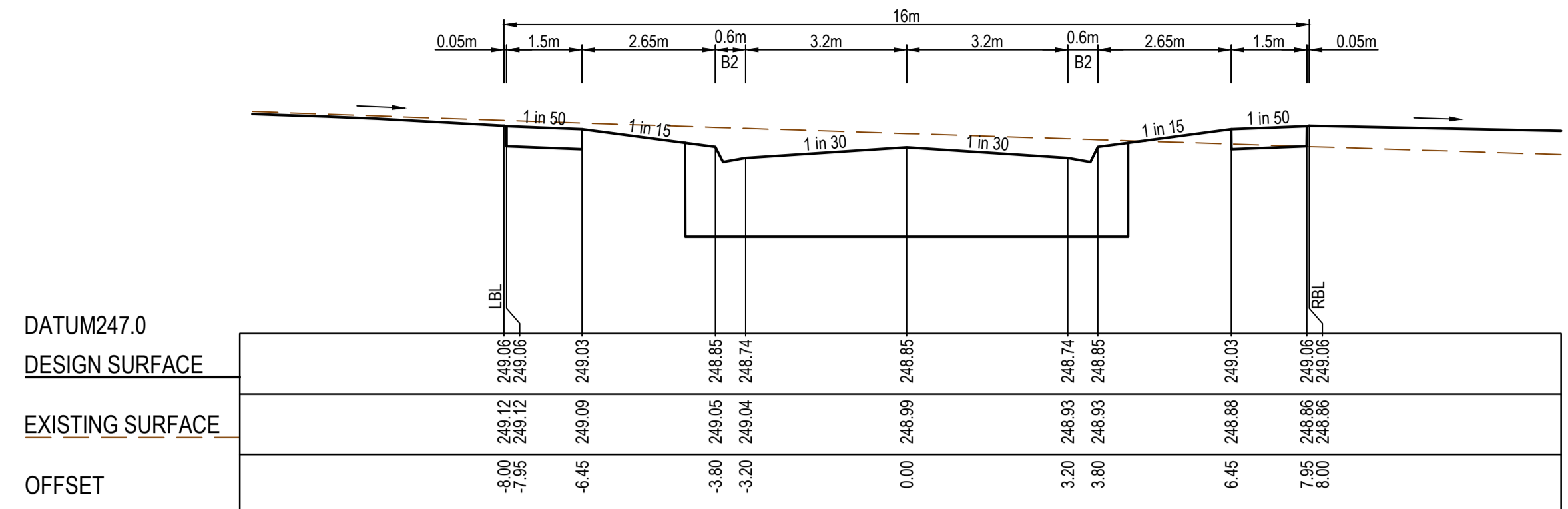
SMEC
 Member of the Surlana Jurong Group
 ABN 47 065 475 149
 Collins Square, Tower 4, Level 20, 727 Collins St
 Melbourne, VIC, 3008, Australia
 03 9514 1500

mirvac

Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Cross Sections: Acres Road

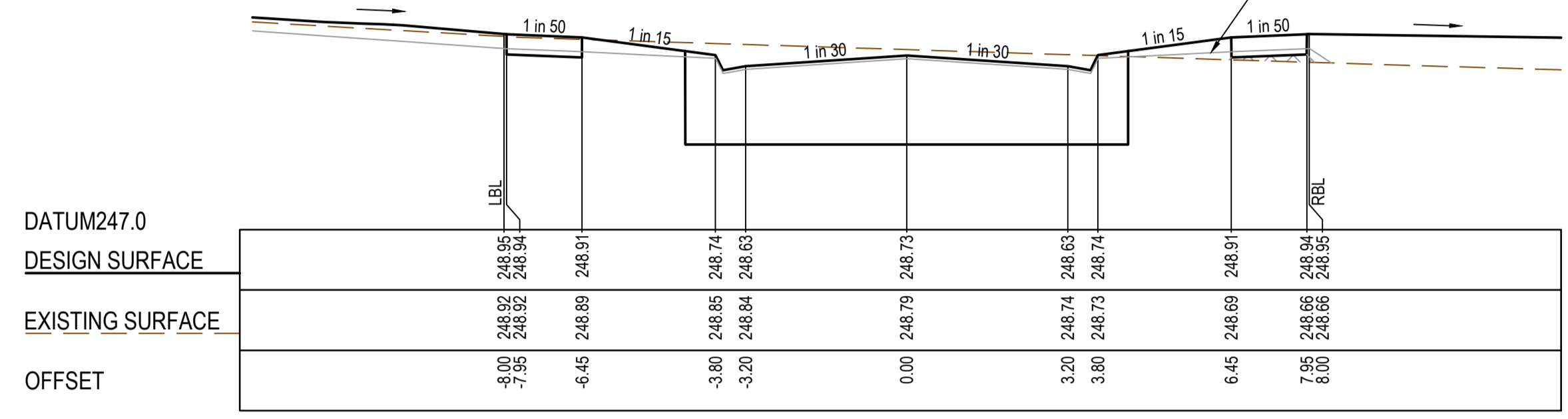
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 PROJECT / DRAWING No: 1700E-024-253
 SHEET No: 13 of 27
 REVISION: 1

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



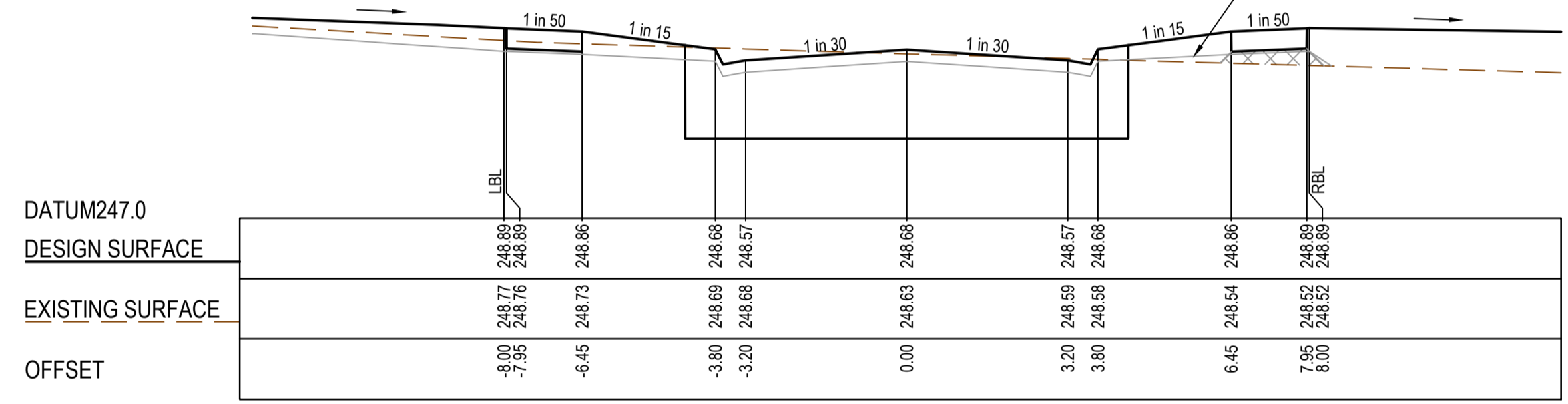
LTPCH 91.15

EARLY EARTHWORKS SURFACE CONSTRUCTED AS PART OF EXISTING STAGE 23



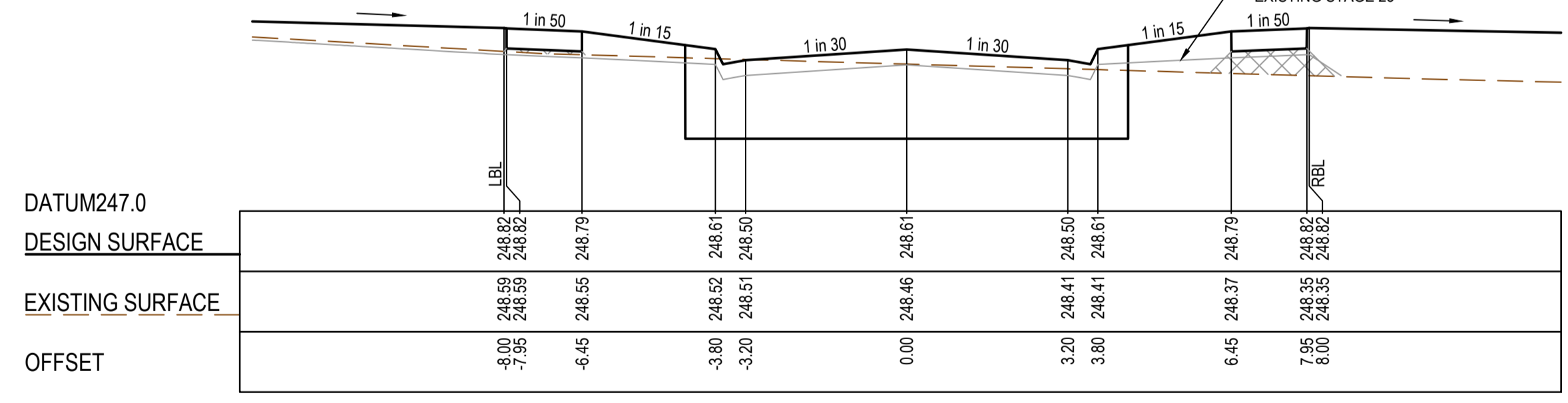
LTPCH 67.55

EARLY EARTHWORKS SURFACE CONSTRUCTED AS PART OF EXISTING STAGE 23

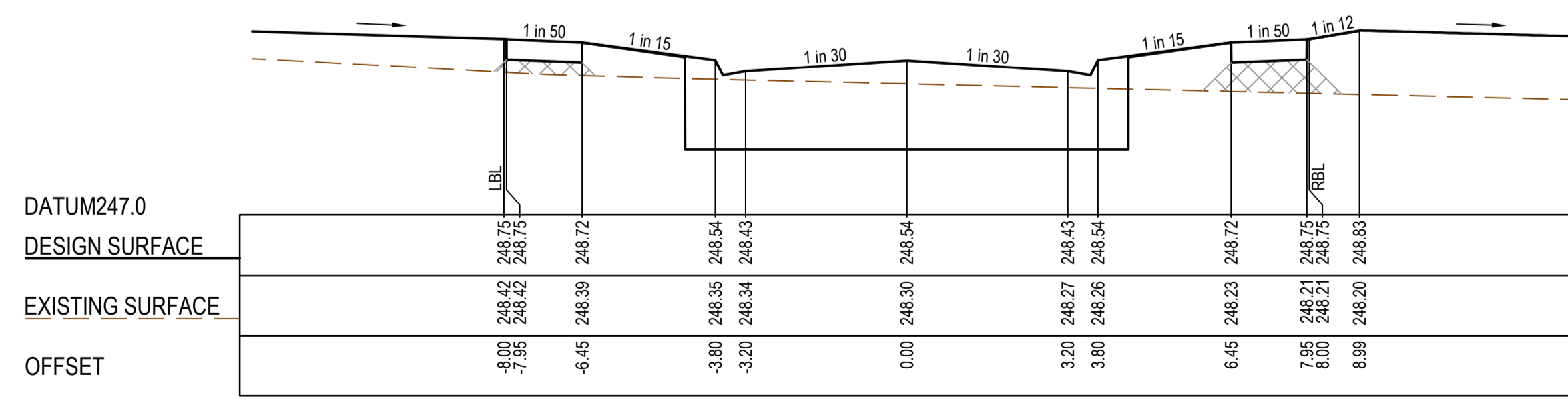


CH 56.25

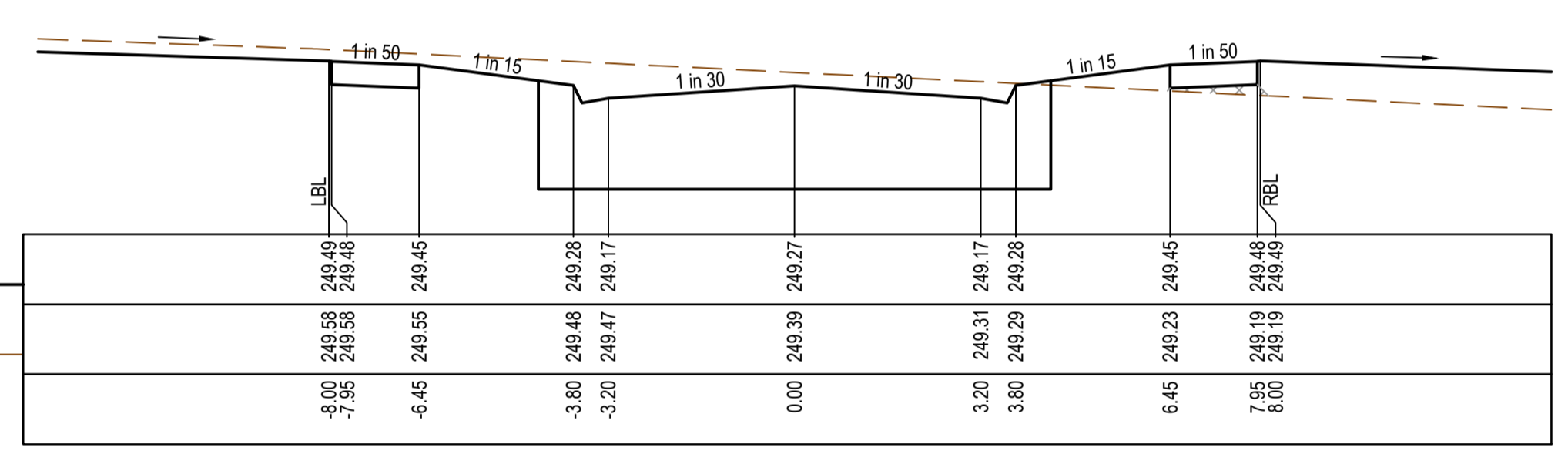
EARLY EARTHWORKS SURFACE CONSTRUCTED AS PART OF EXISTING STAGE 23



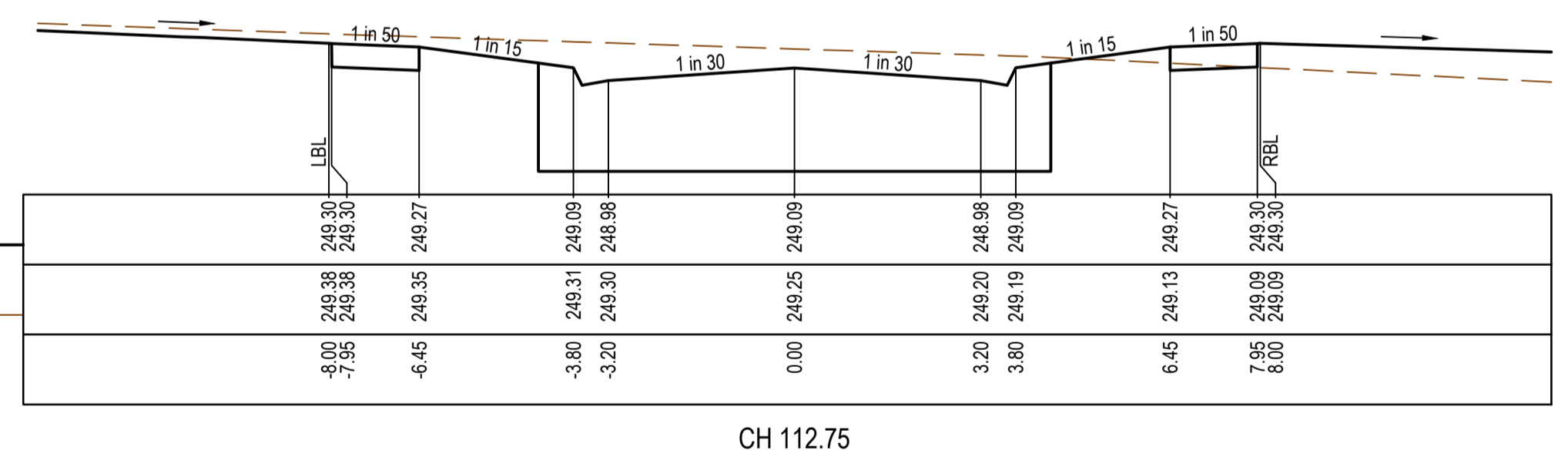
CH 42.25



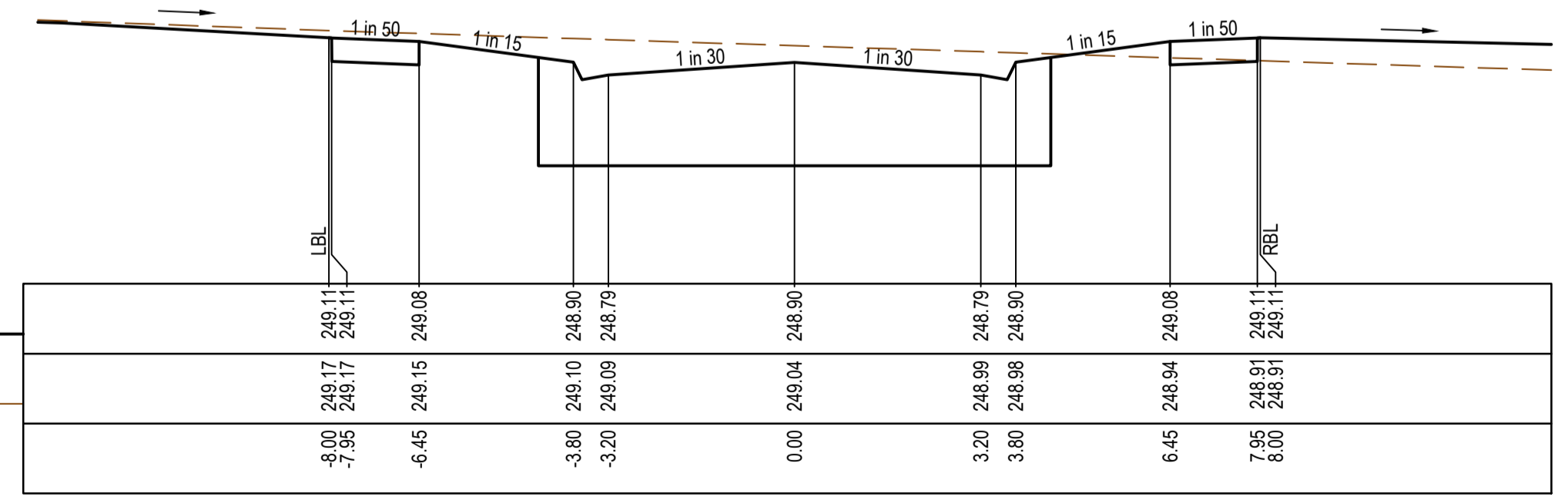
CH 28.25



CH 125.25



CH 112.75



CH 100.25

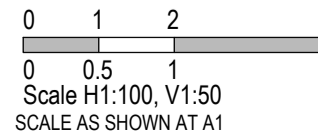
AS CONSTRUCTED PLANS

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PLAN OF SUB. NO.
PS900889F
PERMIT REF. NO.
719067

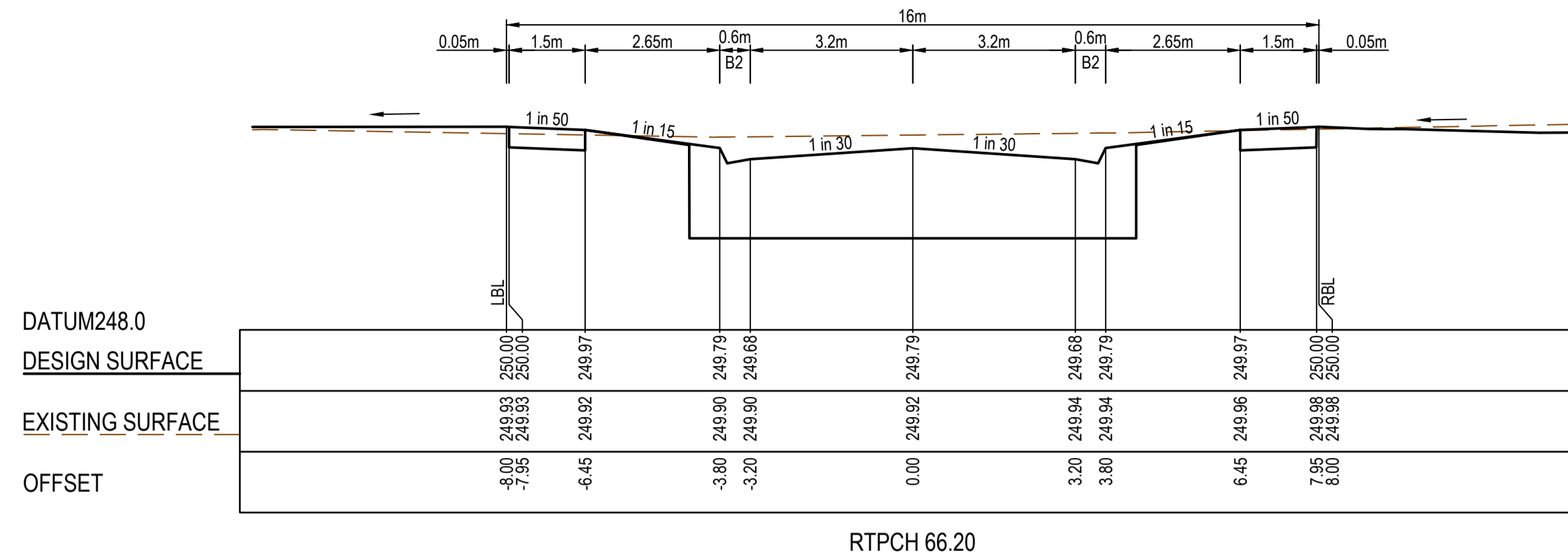
AS CONSTRUCTED



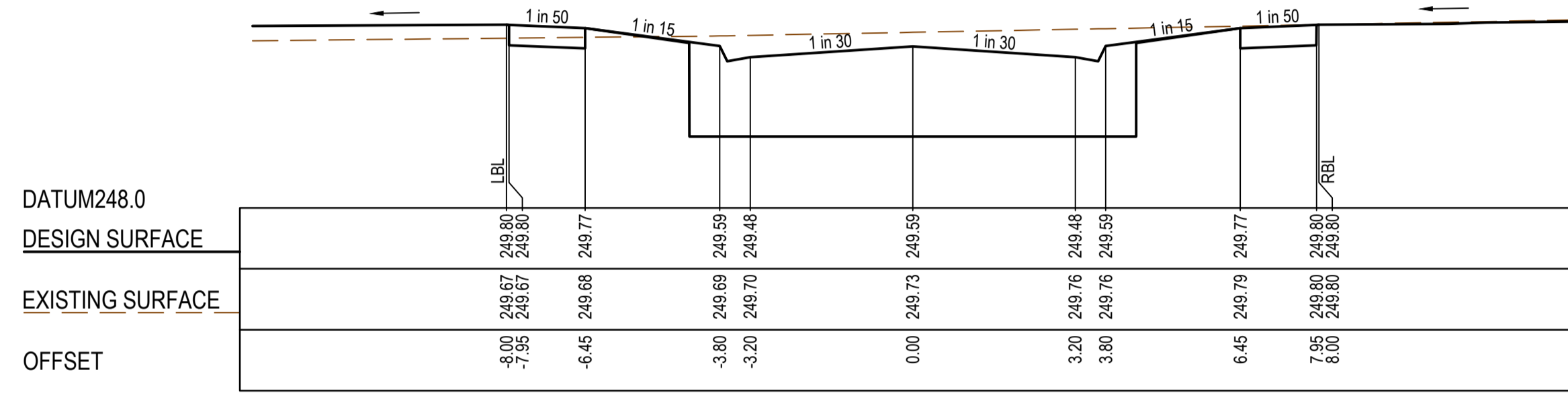
Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Cross Sections: Topiary Way

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-254	SHEET No. 14 of 27	REVISION 2
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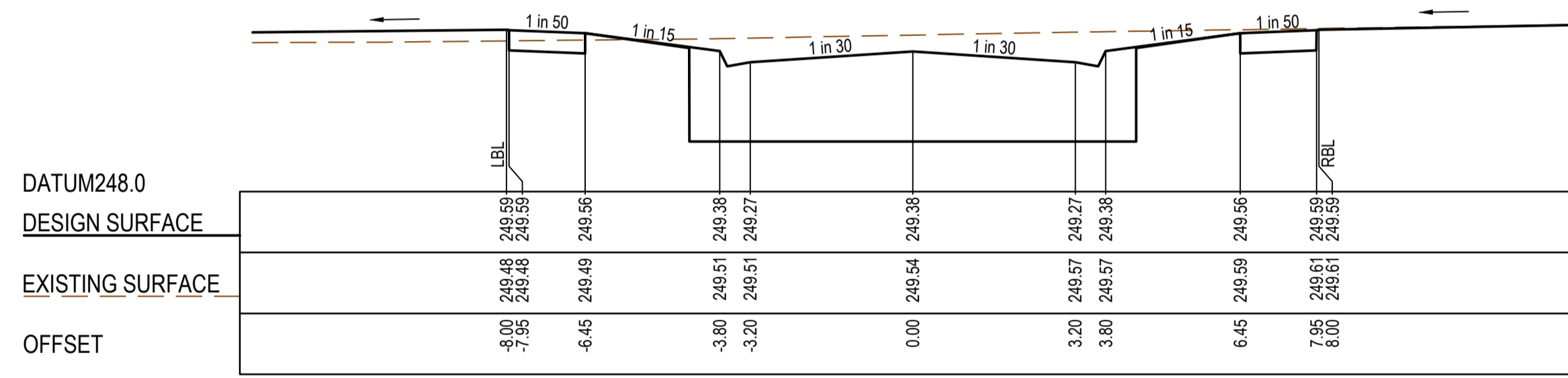
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



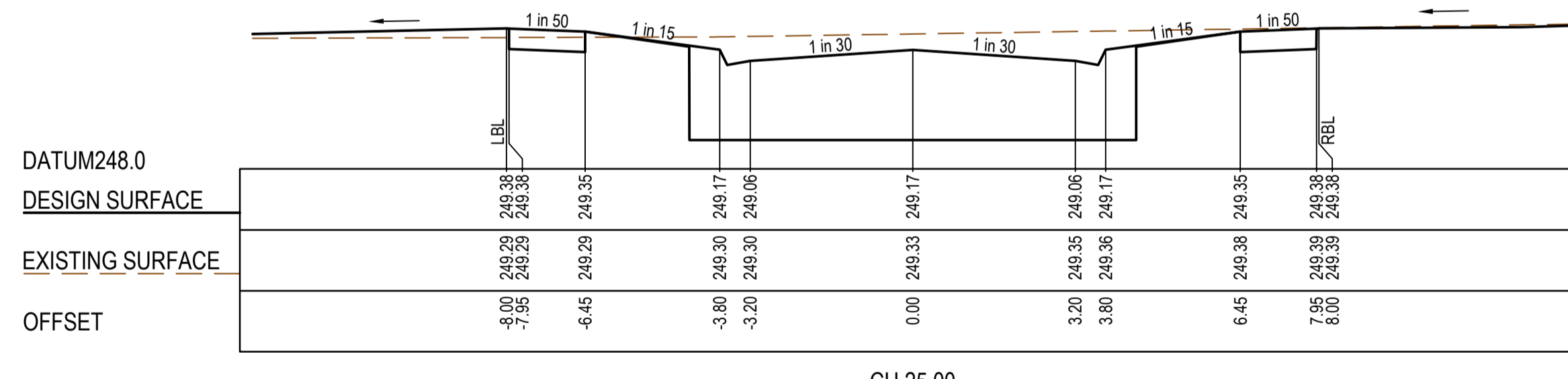
RTPCH 66.20



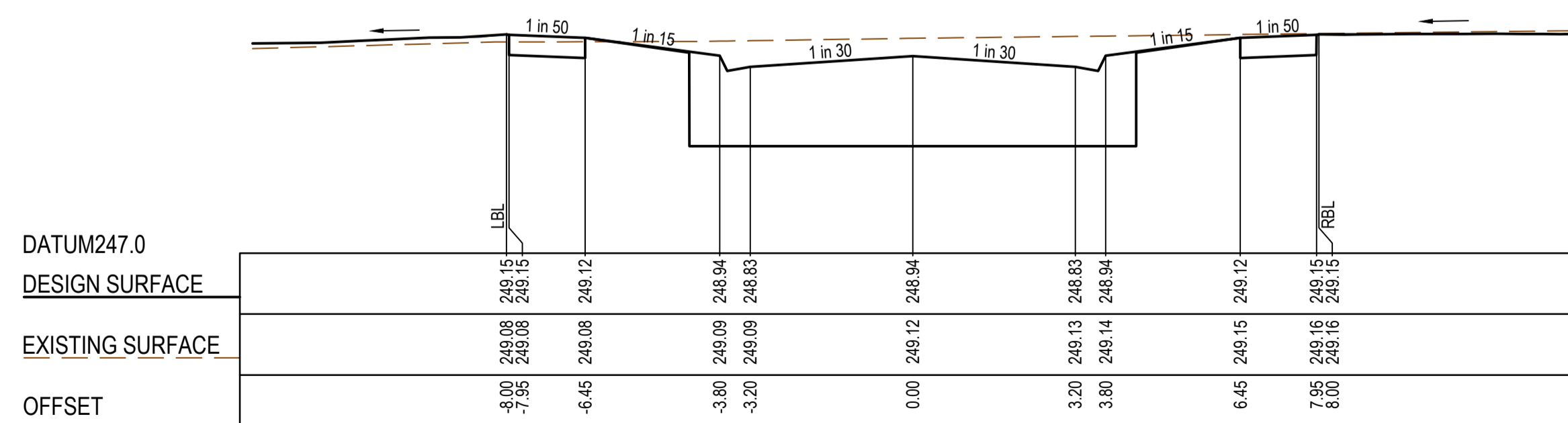
CH 53.00



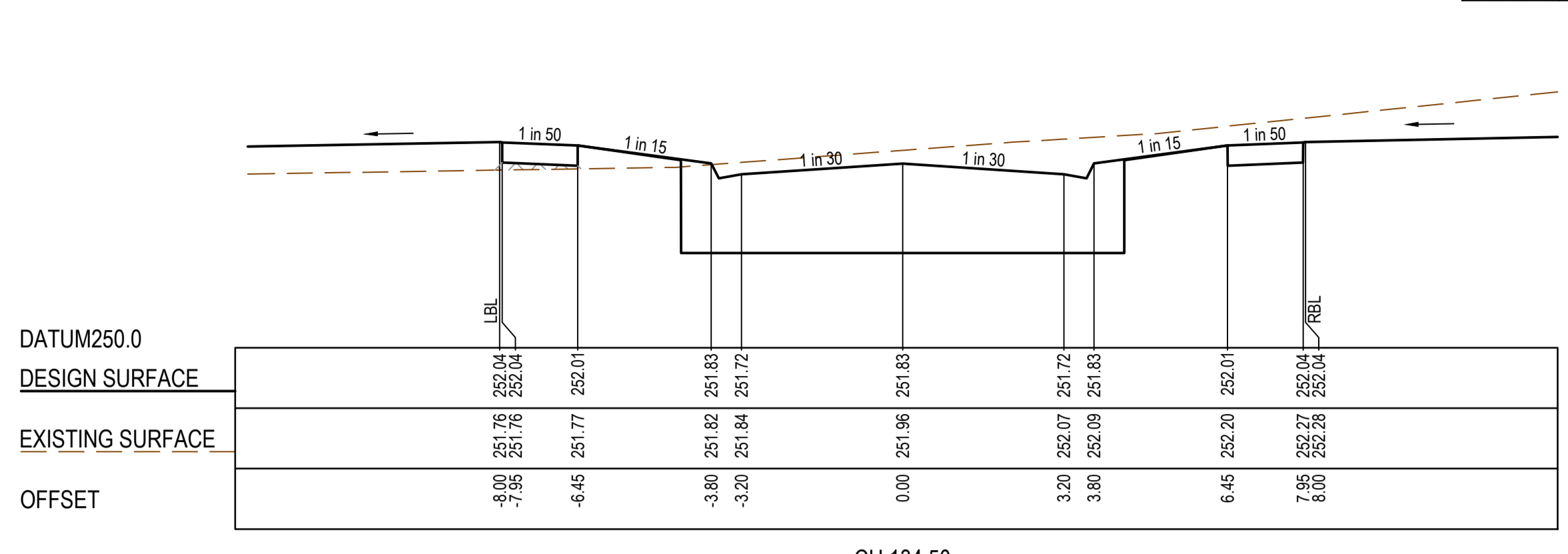
CH 39.00



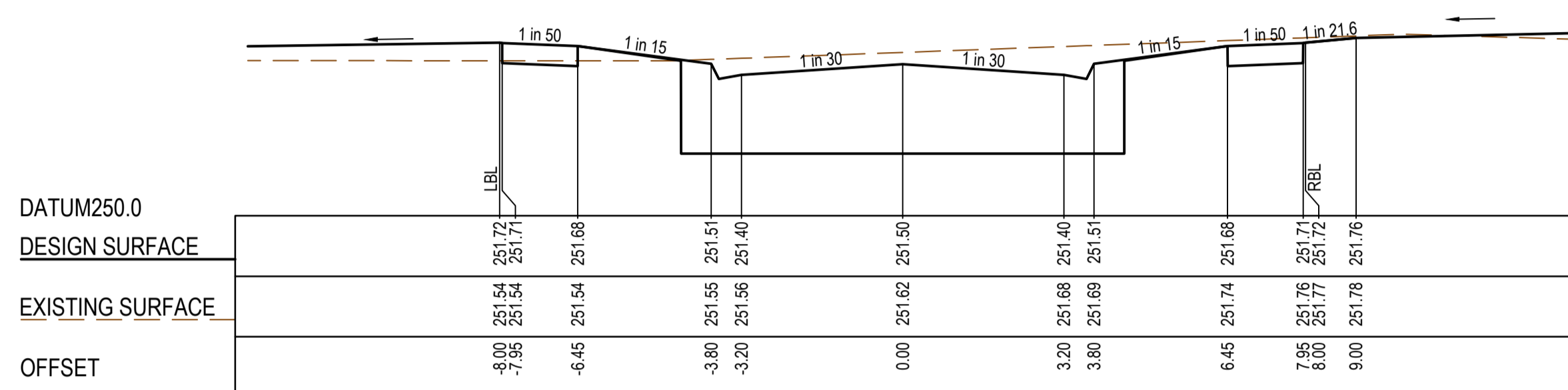
CH 25.00



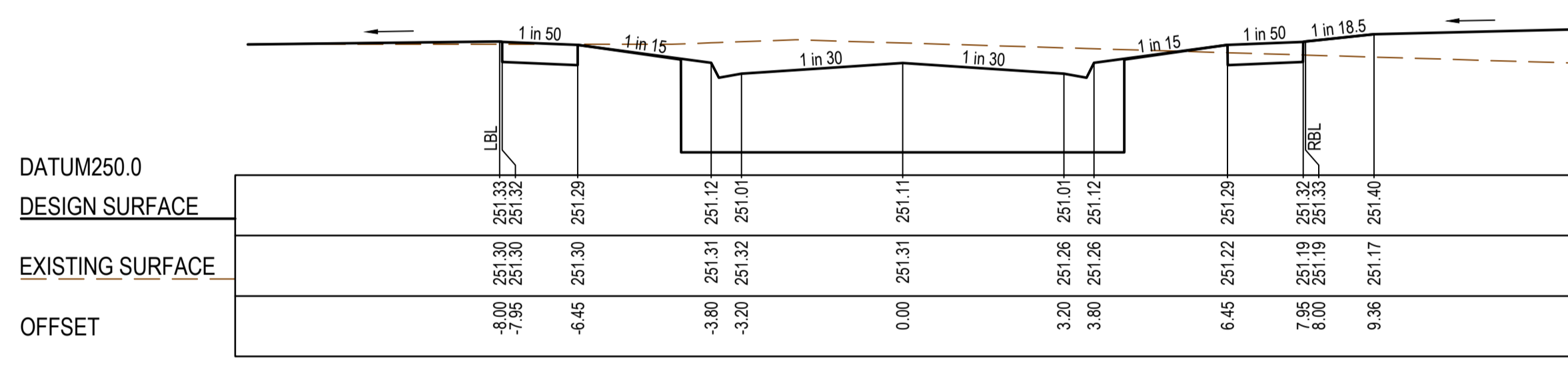
TPCH 11.80



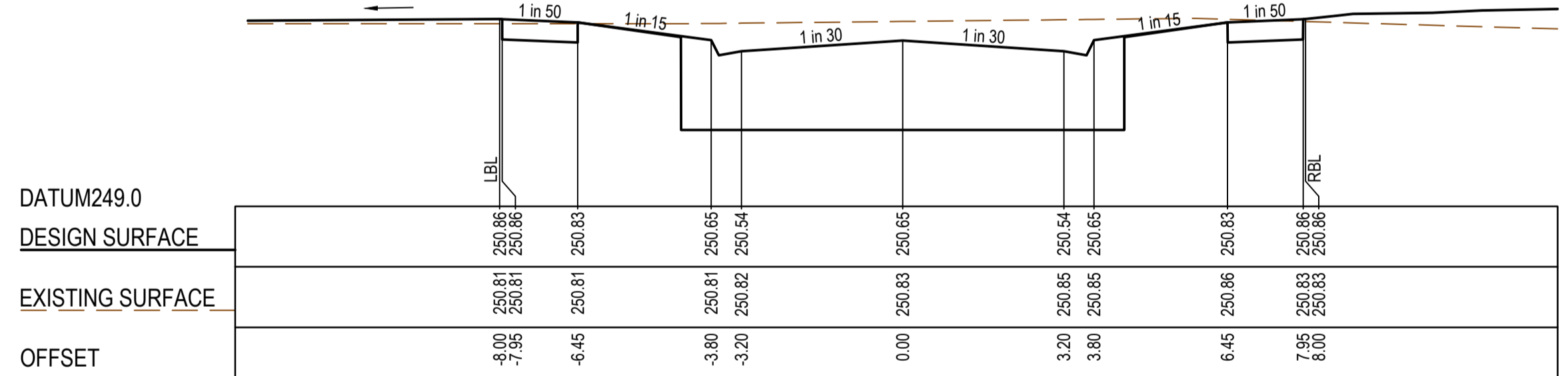
CH 134.50



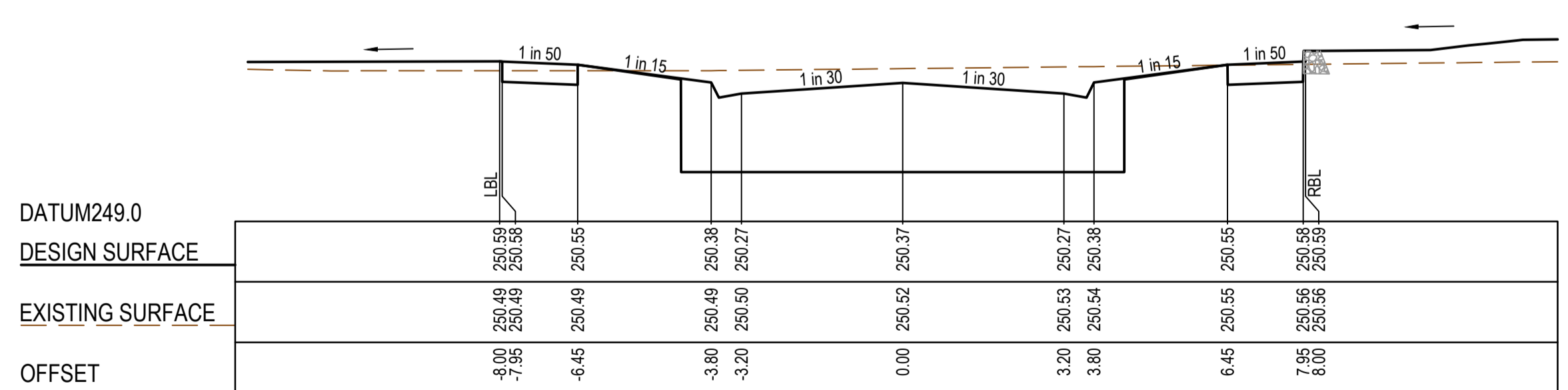
CH 122.00



CH 109.50



CH 97.00



RTPCH 89.80

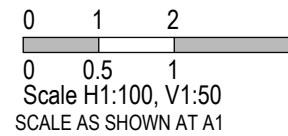
AS CONSTRUCTED PLANS

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AS CONSTRUCTED

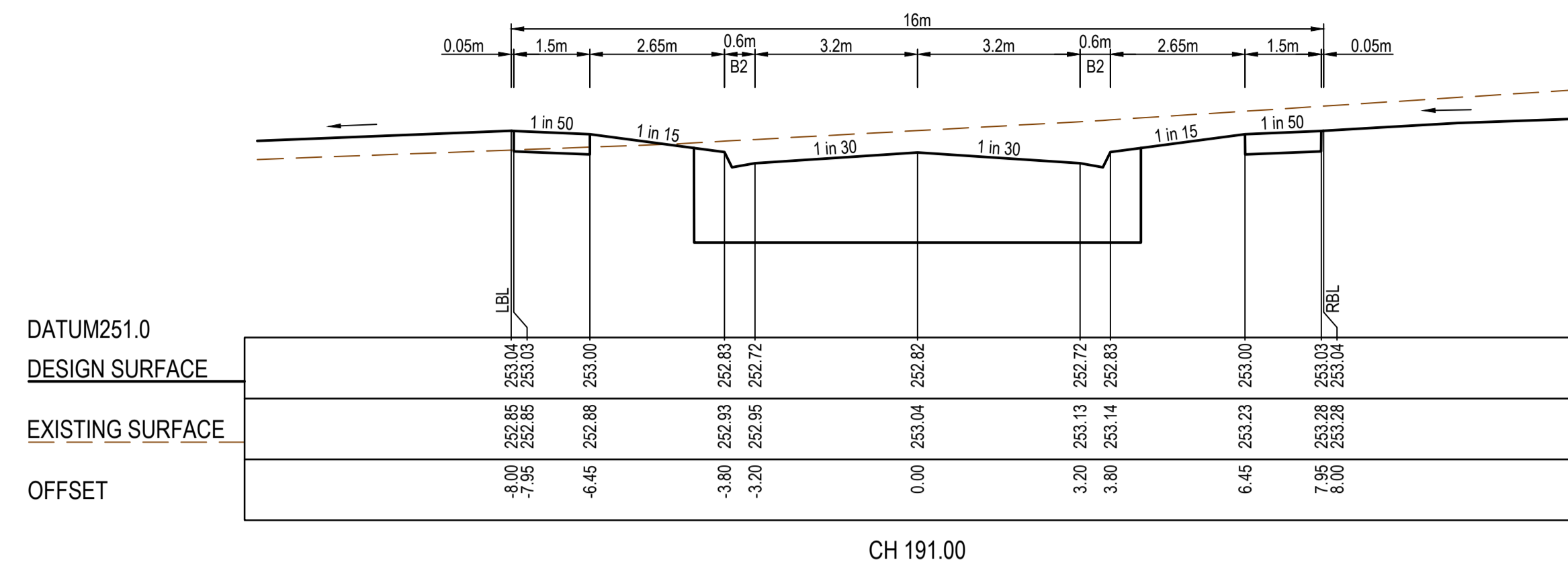
PLAN OF SUB. NO.
PS900888F
PERMIT REF. NO.
719067



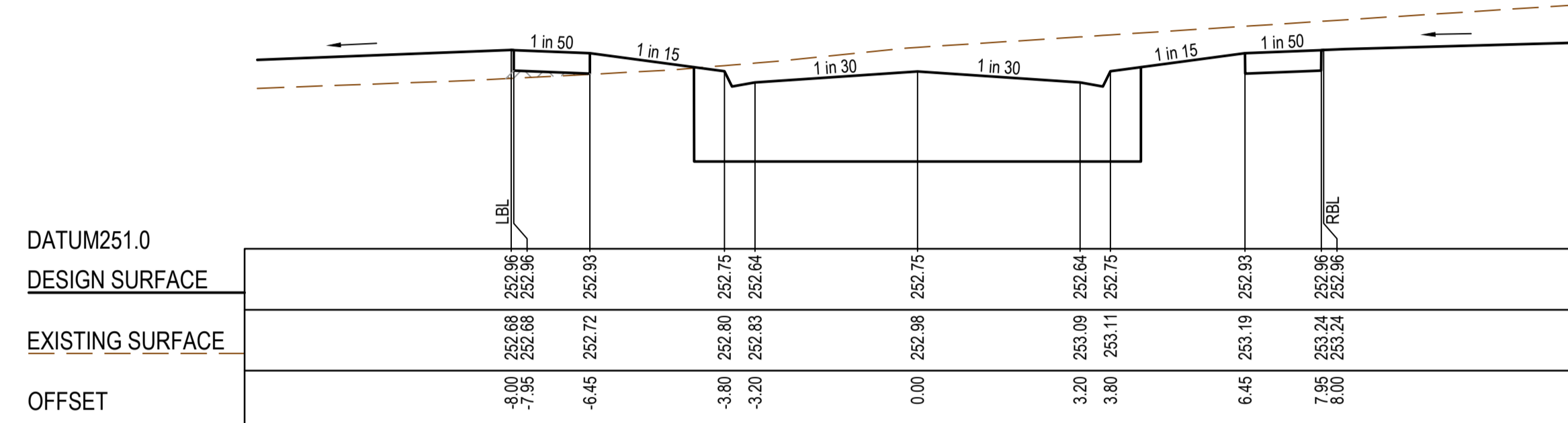
Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Cross Sections: Tannery Street - 1
Ch 11.80 - Ch 134.50

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-255	SHEET No. 15 of 27	REVISION 1
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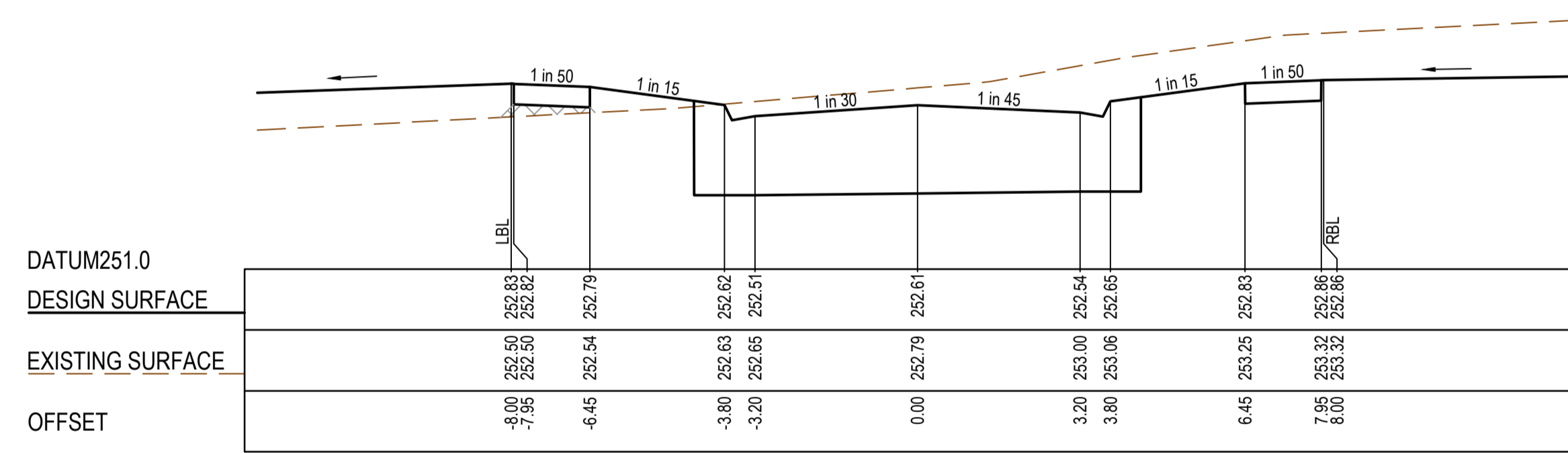
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



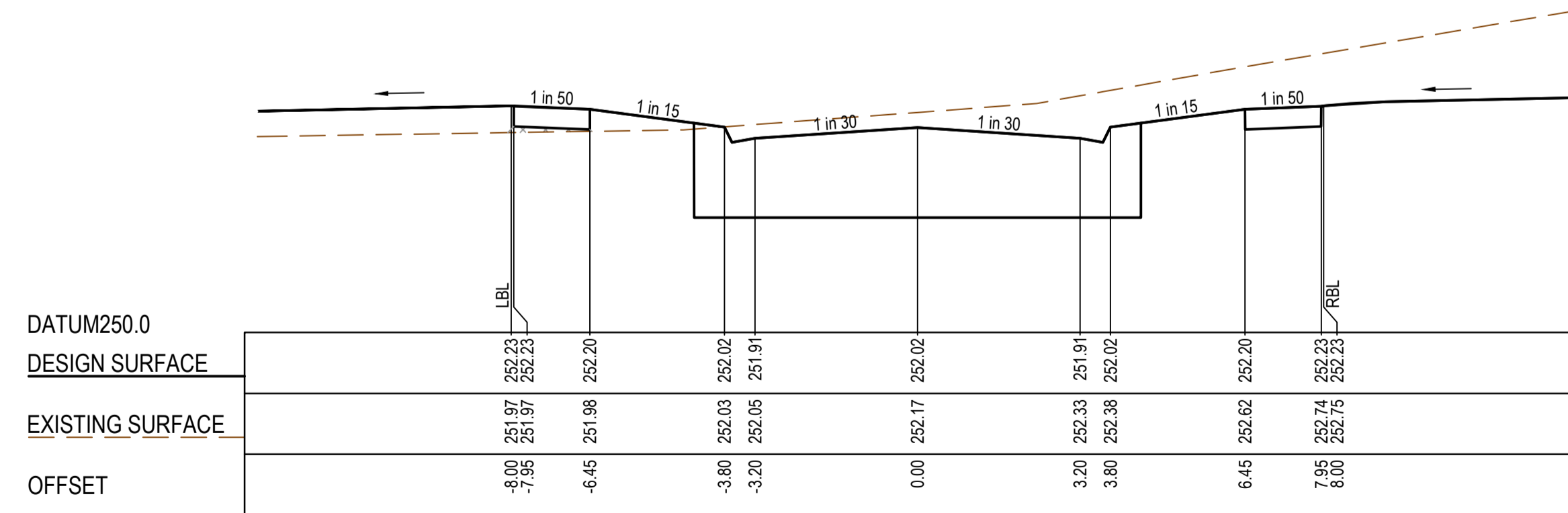
CH 191.00



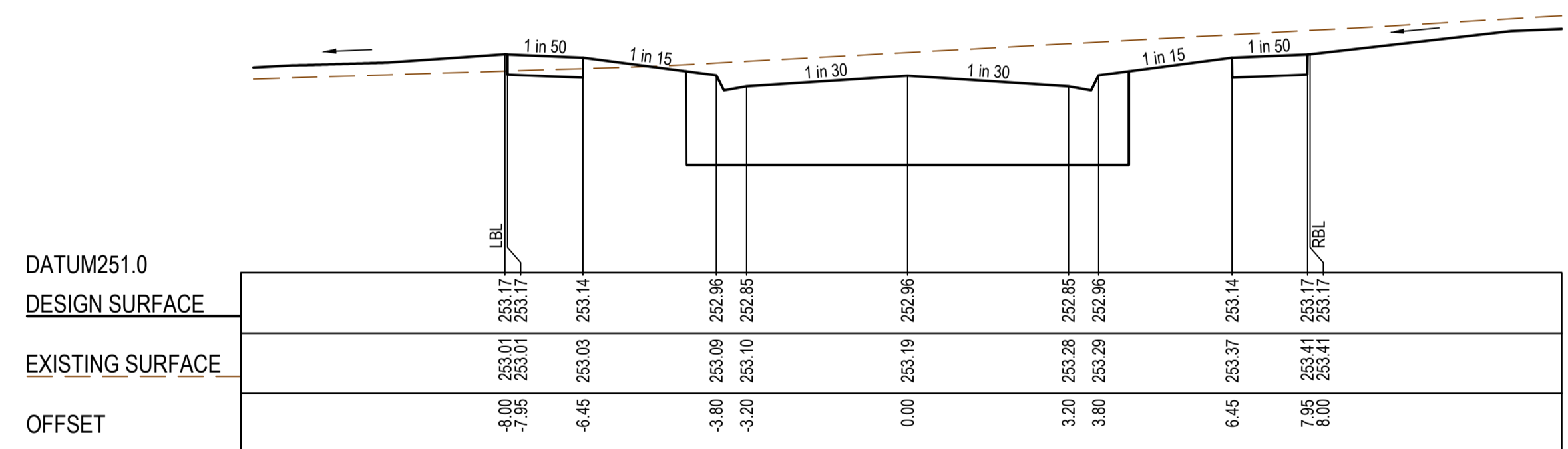
CH 178.50



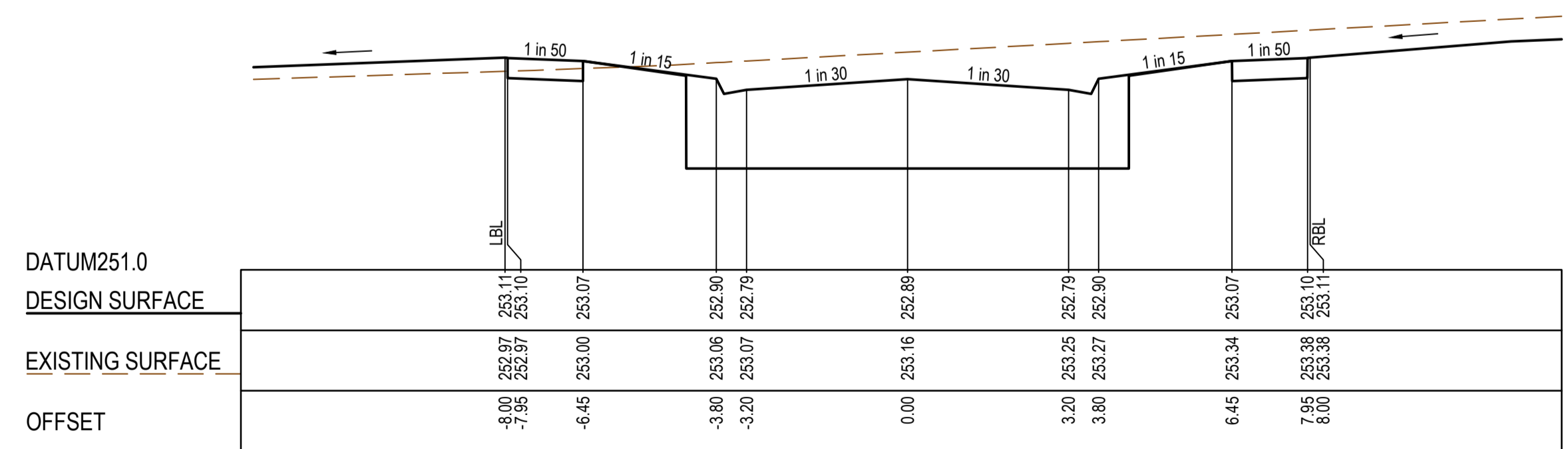
CH 168.30



RTPCH 142.20



TPCH 218.21



CH 205.00

AS CONSTRUCTED PLANS

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Quality Management ISO 9001
 OHS Management AS/NZS 4801
 Environmental Management ISO 14001
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PS900888F
 PERMIT REF. NO.
719067

AS CONSTRUCTED

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 Scale H1:100, V1:50
 SCALE AS SHOWN AT 1

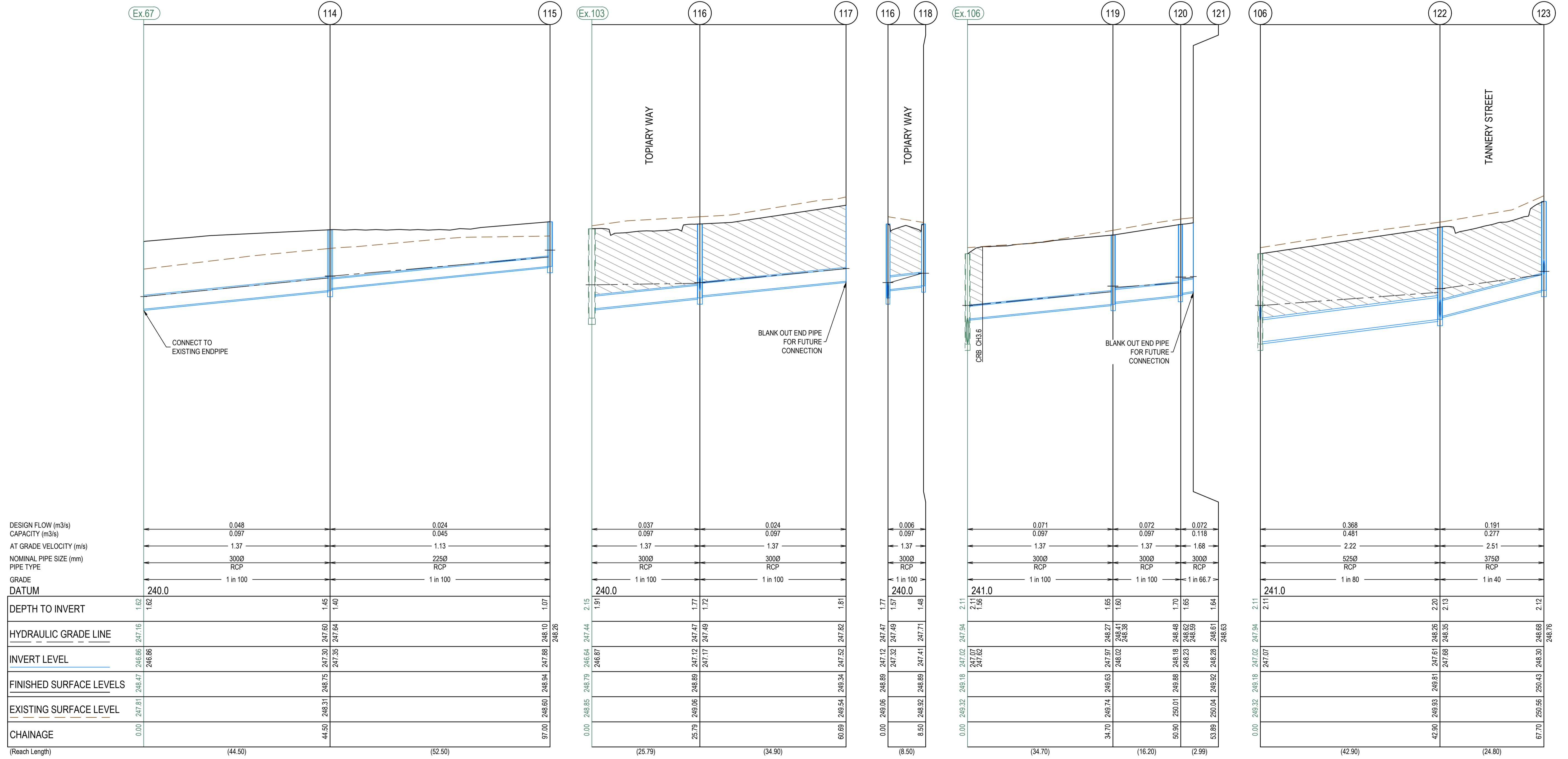
SMEC
 Member of the Surlana Jurong Group
 ABN 47 065 475 149
 Collins Square, Tower 4, Level 20, 727 Collins St
 Melbourne, VIC, 3008, Australia
 03 9514 1500

mirvac

Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Cross Sections: Tannery Street - 2
 Ch142.20 - Ch 218.22

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-256	SHEET No. 16 of 27	REVISION 1
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CRUSHED ROCK BACKFILL
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



AS CONSTRUCTED PLANS

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 OHS Management AS/NZS 4801
 Environmental Management ISO 14001
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AS CONSTRUCTED

PLAN OF SUB. NO.
 PS900888F
 PERMIT REF. NO.
 719067

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 Scale H1:500, V1:50
 SCALE AS SHOWN AT A1

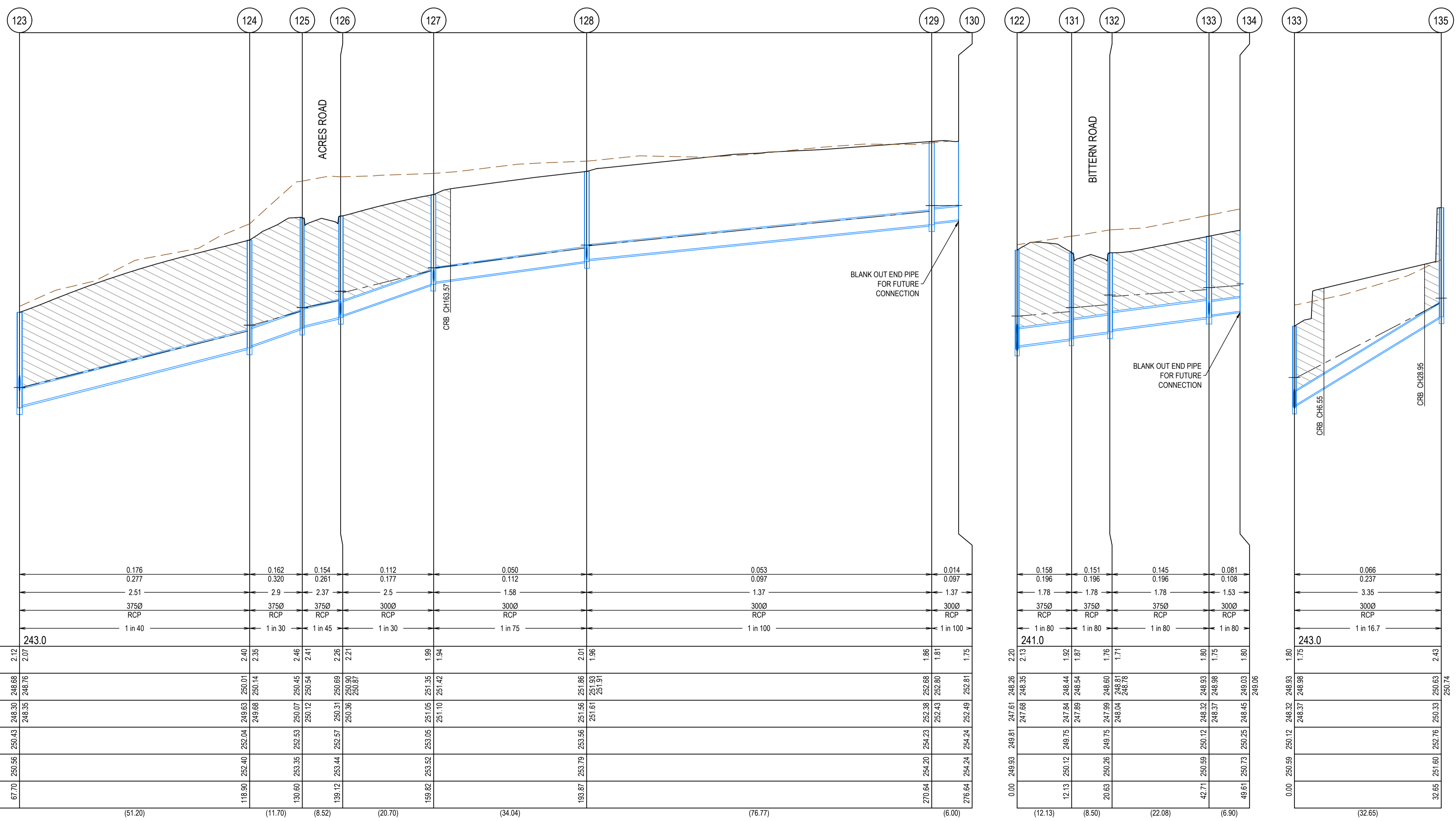
SMEC
 Member of the Surbana Jurong Group
 ABN 47 065 475 149
 Collins Square, Tower 4, Level 20, 727 Collins St
 Melbourne, VIC, 3008, Australia
 03 9514 1500

mirvac

Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Drainage Longitudinal Sections - 1

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-301	SHEET No. 17 of 27	REVISION 2
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CRUSHED ROCK BACKFILL
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



AS CONSTRUCTED PLANS

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

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AS CONSTRUCTED

PLAN OF SUB. NO.
 PS900888F
 PERMIT REF. NO.
 719067

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 Scale H1:500, V1:50
 SCALE AS SHOWN AT 1

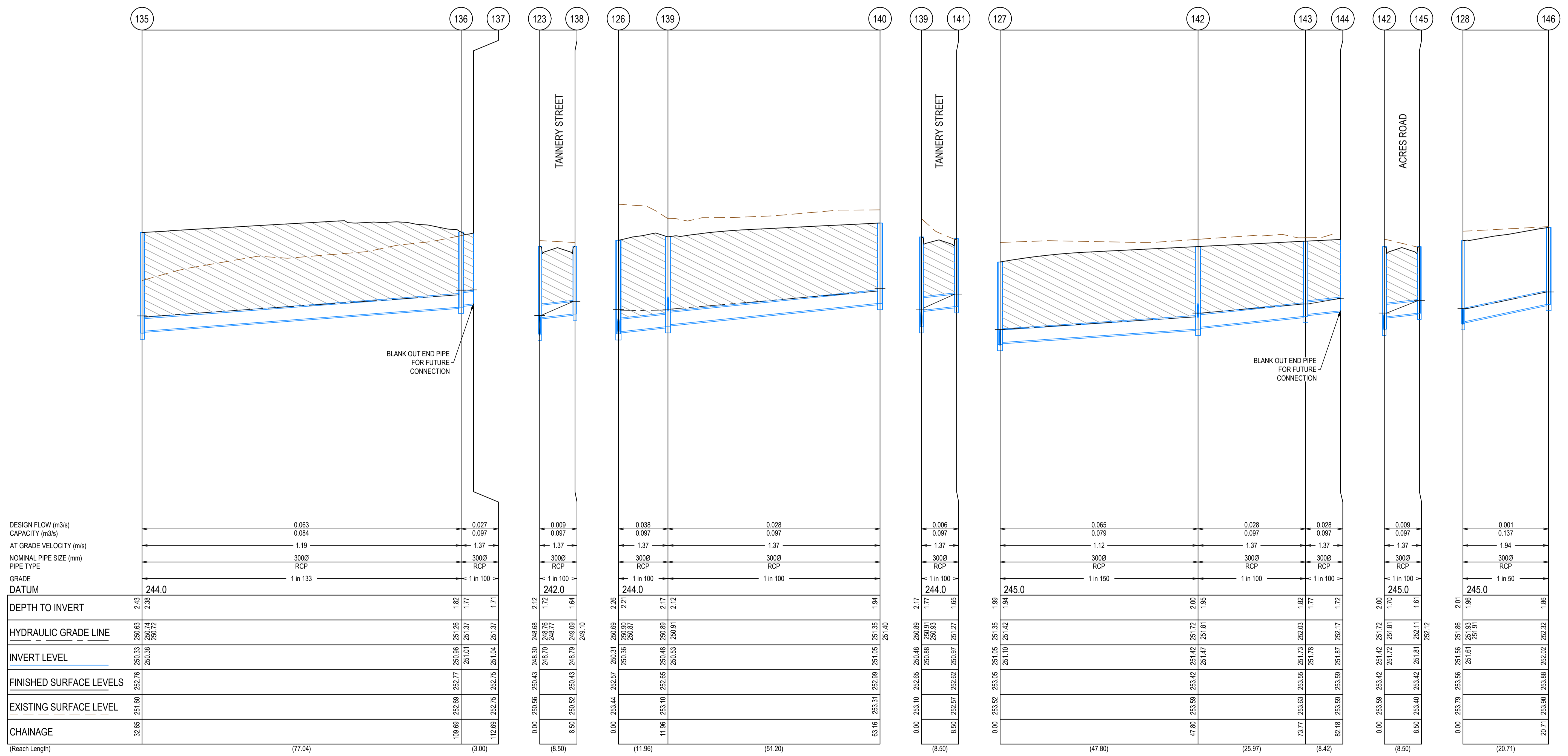
SMEC
 Member of the Surlana Jurong Group
 ABN 47 065 475 149
 Collins Square, Tower 4, Level 20, 727 Collins St
 Melbourne, VIC, 3008, Australia
 03 9514 1500

mirvac

Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Drainage Longitudinal Sections - 2

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-302	SHEET No. 18 of 27	REVISION 1
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CRUSHED ROCK BACKFILL
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



DEPTH TO INVERT	HYDRAULIC GRADE LINE	INVERT LEVEL	FINISHED SURFACE LEVELS	EXISTING SURFACE LEVEL	CHAINAGE
2.43	250.63	250.33	252.76	251.60	32.65
2.38	250.74	250.38	252.76	252.69	109.69
1.82	251.26	250.96	252.77	252.69	112.69
1.77	251.37	251.01	252.75	252.75	
1.71	251.37	251.04	252.75	252.75	

AS CONSTRUCTED PLANS

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AS CONSTRUCTED

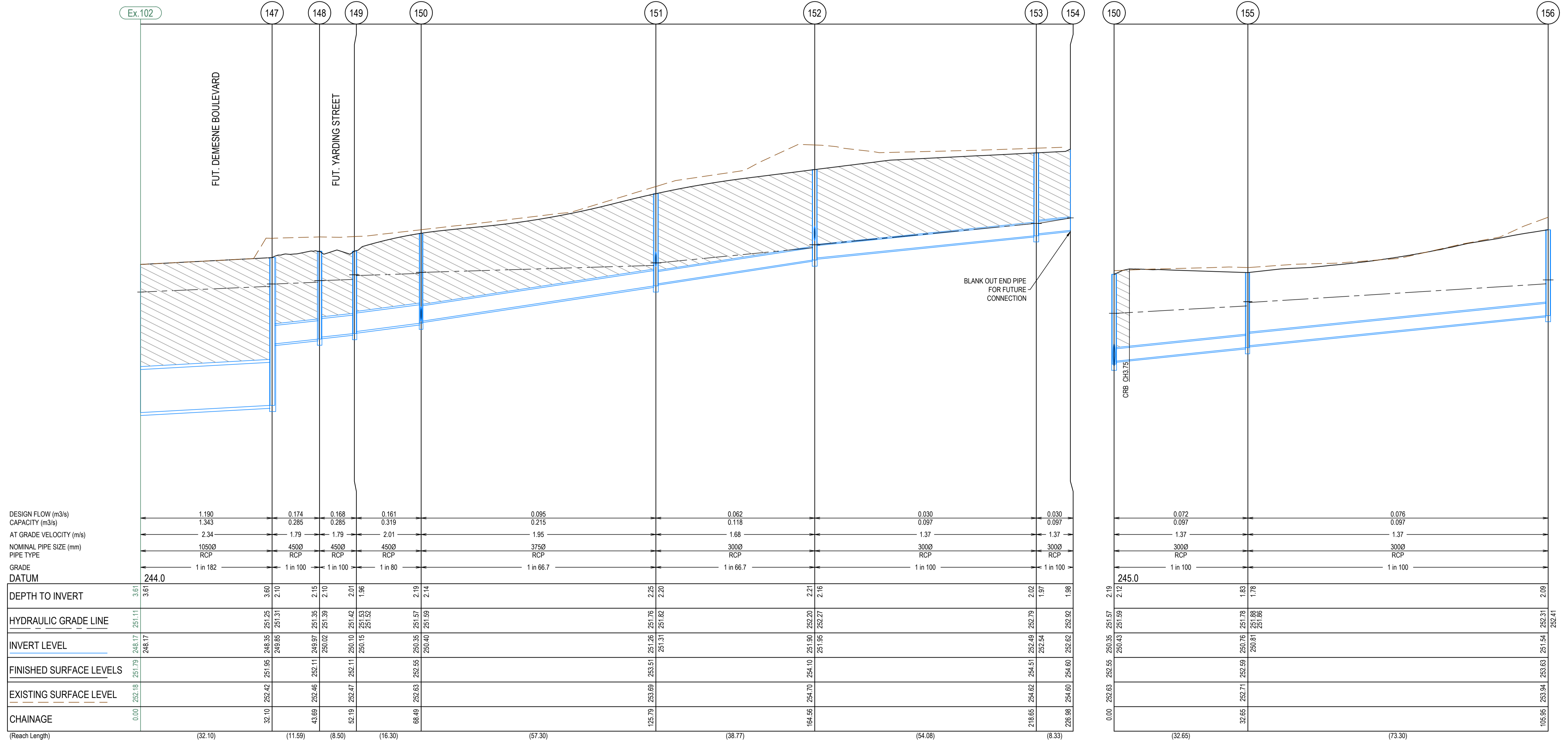
PLAN OF SUB. NO.
 PS900888F
 PERMIT REF. NO.
 719067



Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Drainage Longitudinal Sections - 3

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-303	SHEET No. 19 of 27	REVISION 1
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CRUSHED ROCK BACKFILL
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



AS CONSTRUCTED PLANS

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PLAN OF SUB. NO.
 PS900888F
 PERMIT REF. NO.
 719067

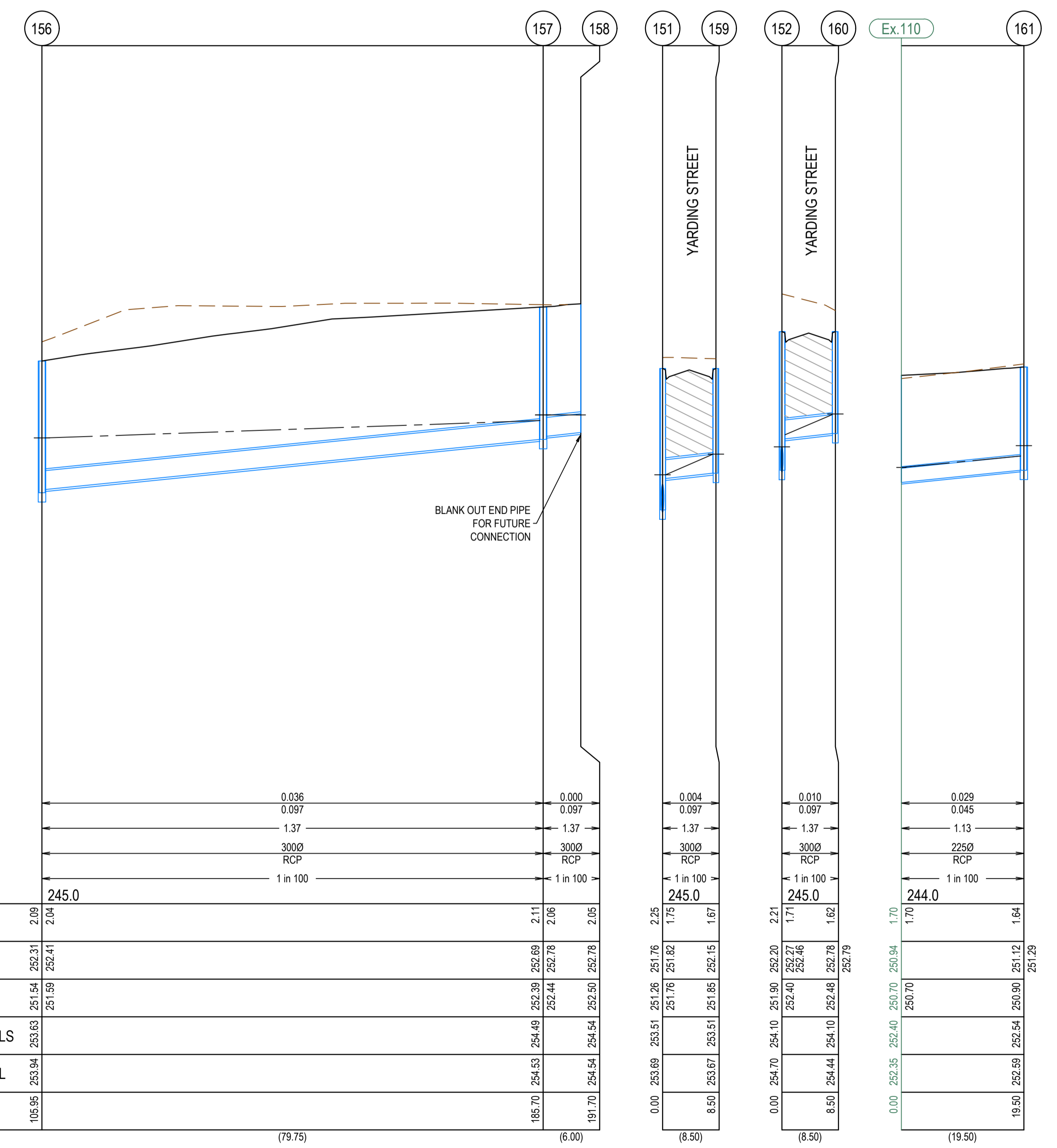
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 Scale H1:500, V1:50
 SCALE AS SHOWN AT A1



Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Drainage Longitudinal Sections - 4

MELWAYS REF: 8M2
 PROJECT / DRAWING No: 1700E-024-304
 SHEET No: 20 of 27
 REVISION: 2

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



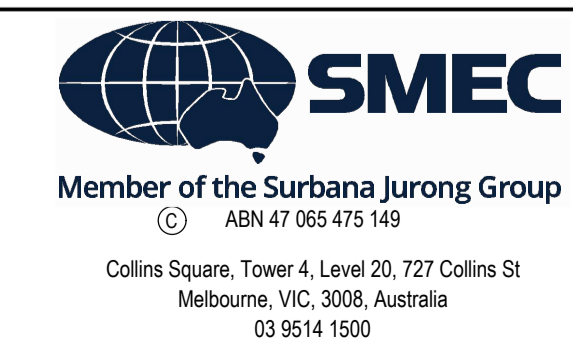
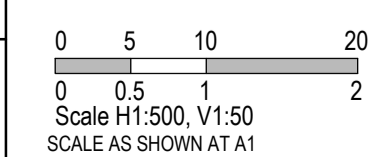
AS CONSTRUCTED PLANS

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PLAN OF SUB. NO.
PS900888F
 PERMIT REF. NO.
719067

AS CONSTRUCTED



Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Drainage Longitudinal Sections - 5

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-305	SHEET No. 21 of 27	REVISION 1
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PIT NUMBER	TYPE	PIT SCHEDULE								REMARKS	
		INTERNAL		INLET		OUTLET		F.S.L.	DEPTH		STANDARD DRAWING
		WIDTH (mm)	LENGTH (mm)	DIAMETER (mm)	INV R.L. (m)	DIAMETER (mm)	INV R.L. (m)				
Ex.67	ENDPIPE			300				248.47	1.62		CONNECT TO EXISTING END PIPE
114	JUNCTION PIT	900	600	225	247.35	300	247.3	248.75	1.45	EDCM 605	
115	JUNCTION PIT	900	600			225	247.88	248.94	1.07	EDCM 605	
Ex.103	SIDE ENTRY PIT	1050	1350	300				248.78	2.13	EDCM 601	CONSTRUCT CATCH PIT ON EXISTING JUNCTION PIT
116	DOUBLE SIDE ENTRY PIT	600	900	300	247.17	300	247.12	248.89	1.77	EDCM 602 & 605	
117	ENDPIPE					300	247.52	249.34	1.81		BLANK OFF ENDPIPE
118	SIDE ENTRY PIT	600	900			300	247.41	248.89	1.48	EDCM 601 & 605	
Ex.106	JUNCTION PIT	900	900	300				249.18	2.16		CONNECT TO EXISTING END PIPE
119	JUNCTION PIT	600	900	300	248.02	300	247.97	249.63	1.66	EDCM 605	
120	JUNCTION PIT	600	900	300	248.23	300	248.18	249.88	1.7	EDCM 605	
121	ENDPIPE					300	248.28	249.92	1.64		BLANK OFF ENDPIPE
122	SIDE ENTRY PIT	600	900	375	247.69	525	247.61	249.61	2.2	EDCM 601 & 605	
123	SIDE ENTRY PIT	600	900	375	248.36	375	248.31	250.43	2.12	EDCM 601 & 605	
124	SIDE ENTRY PIT	600	900	375	249.69	375	249.64	252.04	2.4	EDCM 601 & 605	
125	SIDE ENTRY PIT	600	900	375	250.13	375	250.08	252.53	2.46	EDCM 601 & 605	
126	DOUBLE SIDE ENTRY PIT	600	900	300	250.36	375	250.31	252.57	2.26	EDCM 602 & 605	
127	JUNCTION PIT	600	900	300	251.1	300	251.05	253.05	1.99	EDCM 605	
128	JUNCTION PIT	600	900	300	251.61	300	251.56	253.56	2.01	EDCM 605	
129	JUNCTION PIT	600	900	300	252.43	300	252.38	254.23	1.86	EDCM 605	
130	ENDPIPE					300	252.49	254.24	1.75		BLANK OFF ENDPIPE
131	DOUBLE SIDE ENTRY PIT	600	900	375	247.89	375	247.84	249.76	1.92	EDCM 602 & 605	
132	DOUBLE SIDE ENTRY PIT	600	900	375	248.04	375	247.99	249.76	1.76	EDCM 602 & 605	
133	JUNCTION PIT	600	900	300	248.37	375	248.32	250.12	1.8	EDCM 605	
134	ENDPIPE					300	248.46	250.25	1.8		BLANK OFF ENDPIPE
135	JUNCTION PIT	600	900	300	250.38	300	250.33	252.76	2.43	EDCM 605	
136	JUNCTION PIT	600	900	300	251.01	300	250.96	252.77	1.82	EDCM 605	
137	ENDPIPE					300	251.04	252.75	1.71		BLANK OFF ENDPIPE
138	SIDE ENTRY PIT	600	900			300	248.79	250.43	1.64	EDCM 601 & 605	
139	SIDE ENTRY PIT	600	900	300	250.53	300	250.48	252.65	2.17	EDCM 601 & 605	
140	SIDE ENTRY PIT	600	900			300	251.05	252.99	1.94	EDCM 601 & 605	
141	SIDE ENTRY PIT	600	900			300	250.97	252.62	1.65	EDCM 601 & 605	
142	SIDE ENTRY PIT	600	900	300	251.47	300	251.42	253.42	2	EDCM 601 & 605	
143	SIDE ENTRY PIT	600	900	300	251.78	300	251.73	253.55	1.82	EDCM 601 & 605	
144	ENDPIPE					300	251.87	253.59	1.73		BLANK OFF ENDPIPE
145	SIDE ENTRY PIT	600	900			300	251.81	253.42	1.61	EDCM 601 & 605	
146	JUNCTION PIT	900	600			300	252.02	253.88	1.86	EDCM 605	
Ex.102	ENDPIPE			900				251.79	3.61		CONNECT TO EXISTING END PIPE
147	JUNCTION PIT	1350	900	450	249.85	1050	248.35	251.95	3.6	EDCM 607	PIT TO BE HAUNCHED TO 600x900 COVER. CONSTRUCT AS JUNCTION PIT WITH CATCH PIT CONVERSION TO BE COMPLETED AS PART OF FUTURE STAGE WORKS. PROVIDE 1050 DIA BLOCKOUT ON NORTHERN WALL AT IL 248.40
148	JUNCTION PIT	600	900	450	250.02	450	249.97	252.11	2.15	EDCM 605	CONSTRUCT AS JUNCTION PIT WITH CATCH PIT CONVERSION TO BE COMPLETED AS PART OF FUTURE STAGE WORKS.
149	JUNCTION PIT	600	900	450	250.15	450	250.1	252.11	2.01	EDCM 605	CONSTRUCT AS JUNCTION PIT WITH CATCH PIT CONVERSION TO BE COMPLETED AS PART OF FUTURE STAGE WORKS.
150	JUNCTION PIT	600	900	375	250.4	450	250.35	252.55	2.19	EDCM 605	
151	SIDE ENTRY PIT	600	900	300	251.31	375	251.26	253.51	2.25	EDCM 601 & 605	
152	SIDE ENTRY PIT	600	900	300	251.95	300	251.9	254.1	2.21	EDCM 601 & 605	
153	SIDE ENTRY PIT	600	900	300	252.54	300	252.49	254.51	2.02	EDCM 601 & 605	
154	ENDPIPE					300	252.62	254.6	1.98		BLANK OFF END PIPE
155	JUNCTION PIT	900	600	300	250.81	300	250.76	252.59	1.83	EDCM 605	
156	JUNCTION PIT	600	900	300	251.59	300	251.54	253.63	2.1	EDCM 605	
157	JUNCTION PIT	600	900	300	252.44	300	252.39	254.49	2.11	EDCM 605	
158	ENDPIPE					300	252.5	254.54	2.05		BLANK OFF END PIPE
159	SIDE ENTRY PIT	600	900			300	251.85	253.51	1.67	EDCM 601 & 605	
160	SIDE ENTRY PIT	600	900			300	252.48	254.1	1.62	EDCM 601 & 605	
Ex.110	ENDPIPE			225				252.41	1.7		CONNECT TO EXISTING END PIPE
161	JUNCTION PIT	600	900			225	250.9	252.54	1.64	EDCM 605	

AS CONSTRUCTED PLANS

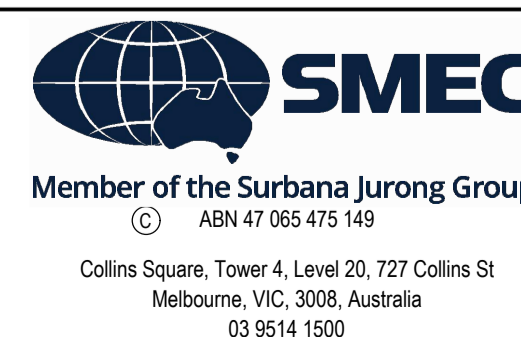
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PLAN OF SUB. NO.
PS900888F
PERMIT REF. NO.
719067

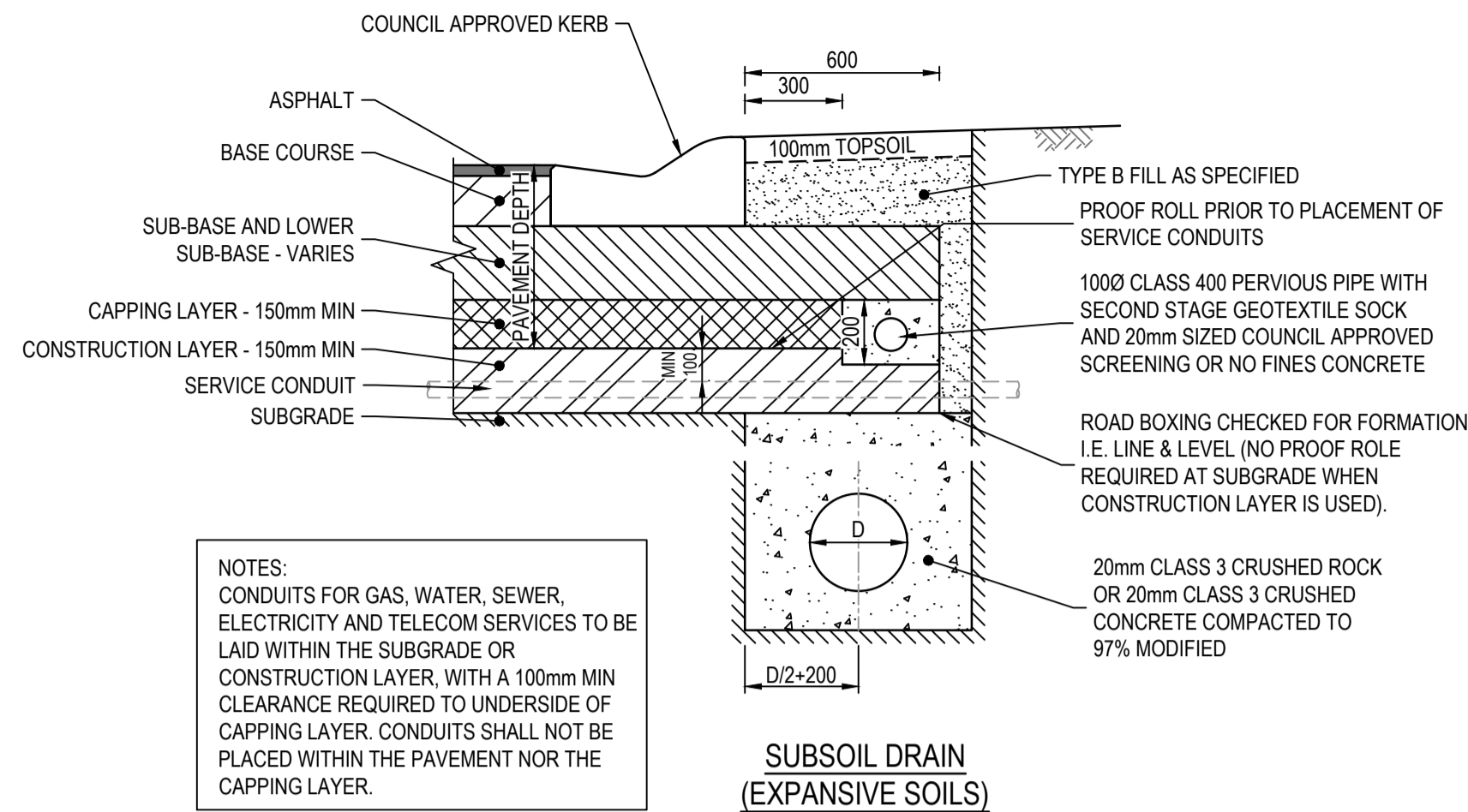
AS CONSTRUCTED

SCALE AS SHOWN AT A1



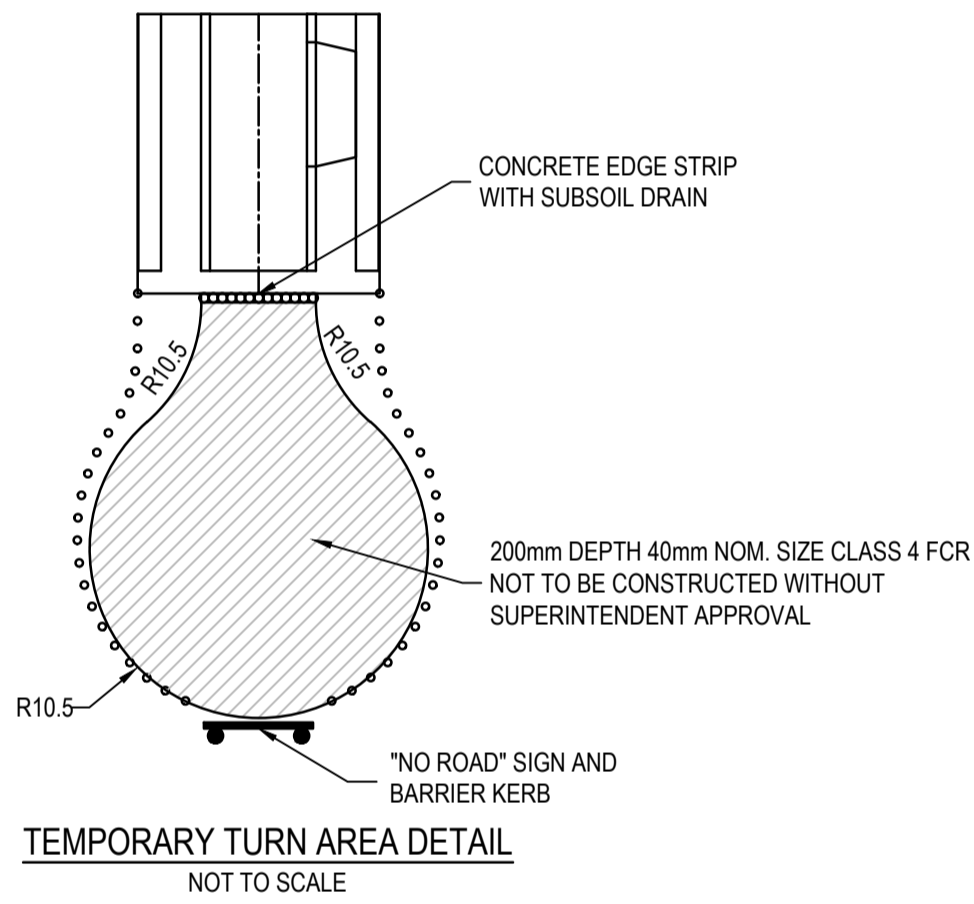
Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Pit Schedule

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-351	SHEET No. 22 of 27	REVISION 1
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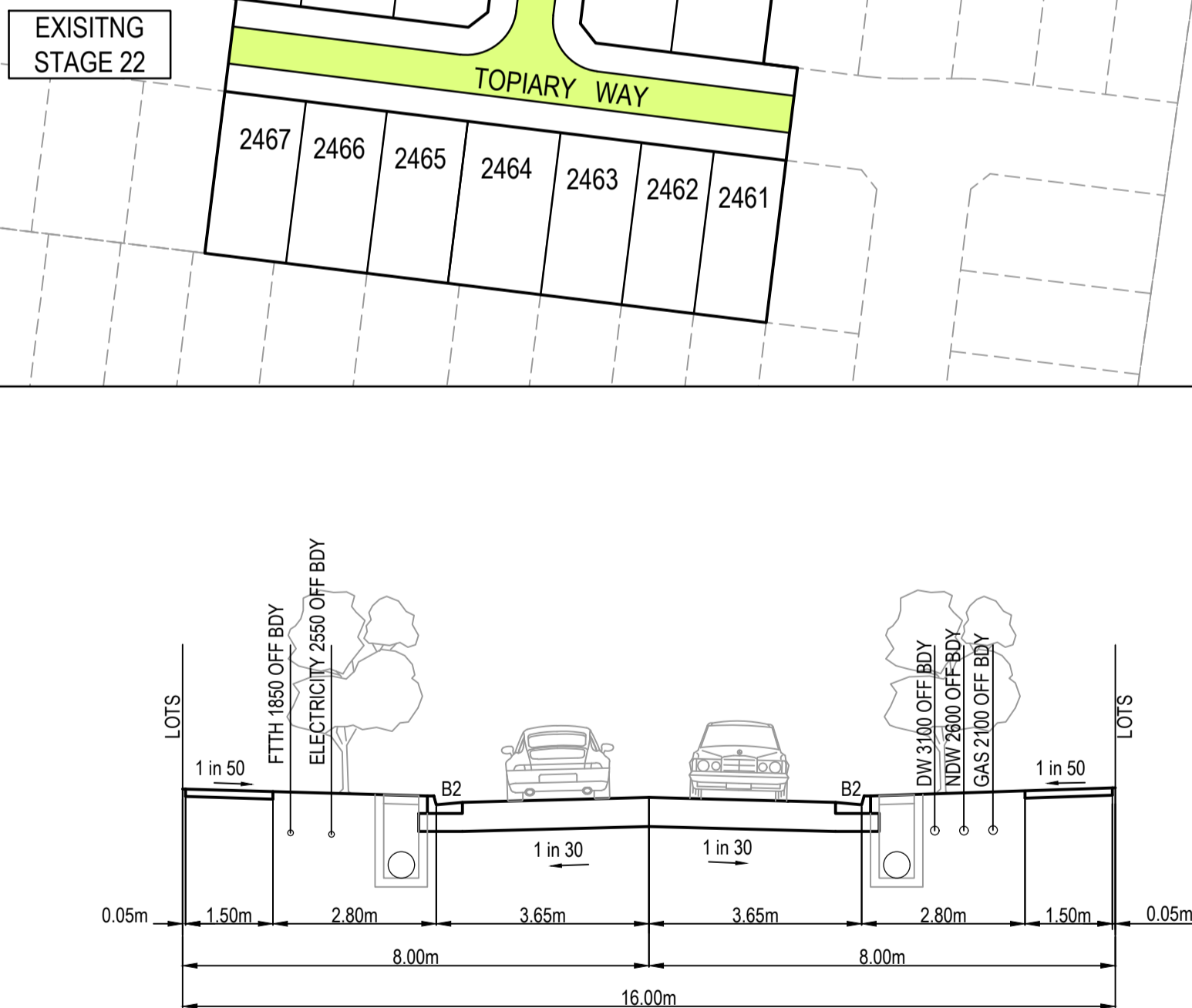
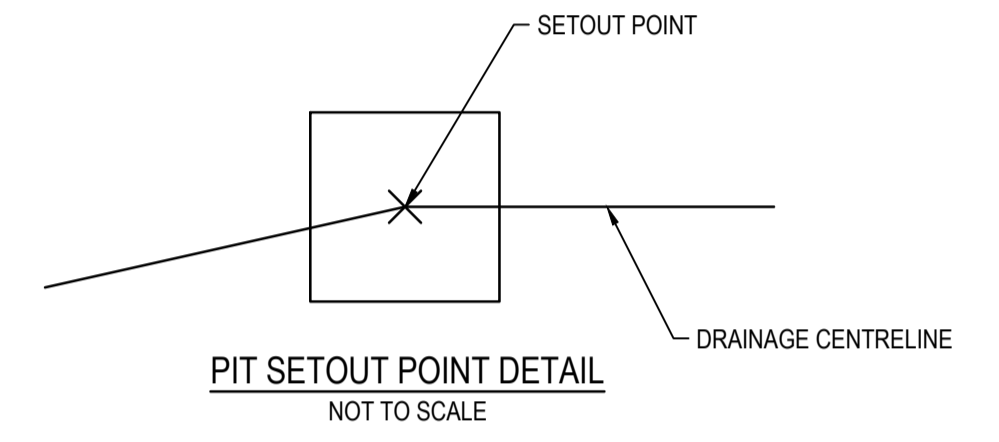
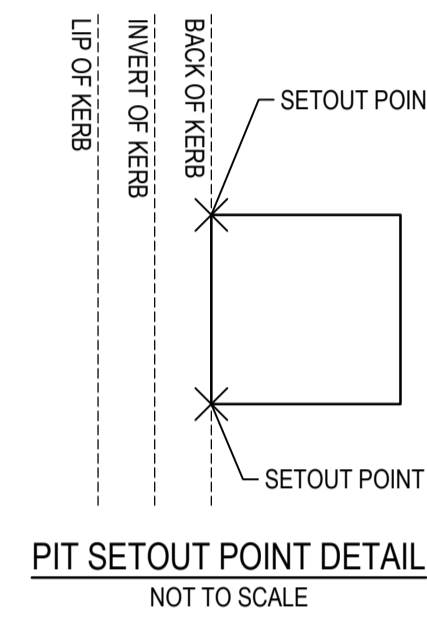
NOTES:
CONDUITS FOR GAS, WATER, SEWER, ELECTRICITY AND TELECOM SERVICES TO BE LAID WITHIN THE SUBGRADE OR CONSTRUCTION LAYER, WITH A 100mm MIN CLEARANCE REQUIRED TO UNDERSIDE OF CAPPING LAYER. CONDUITS SHALL NOT BE PLACED WITHIN THE PAVEMENT NOR THE CAPPING LAYER.

SUBSOIL DRAIN (EXPANSIVE SOILS)
REFER EDMC STD DWG 202A
NOT TO SCALE

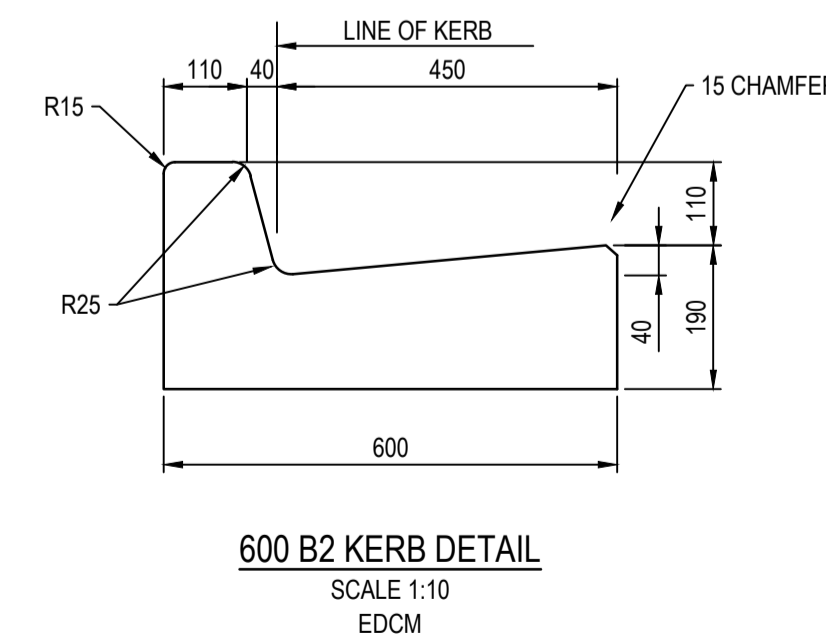
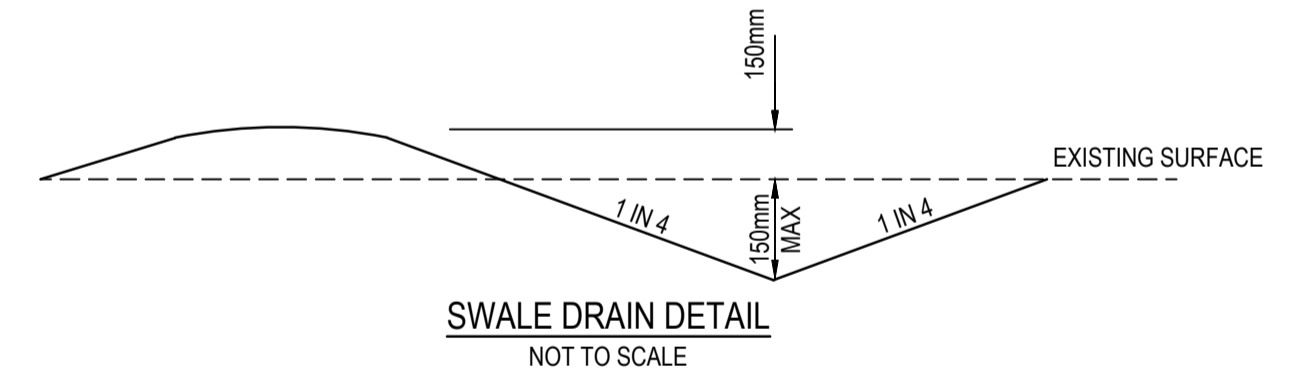
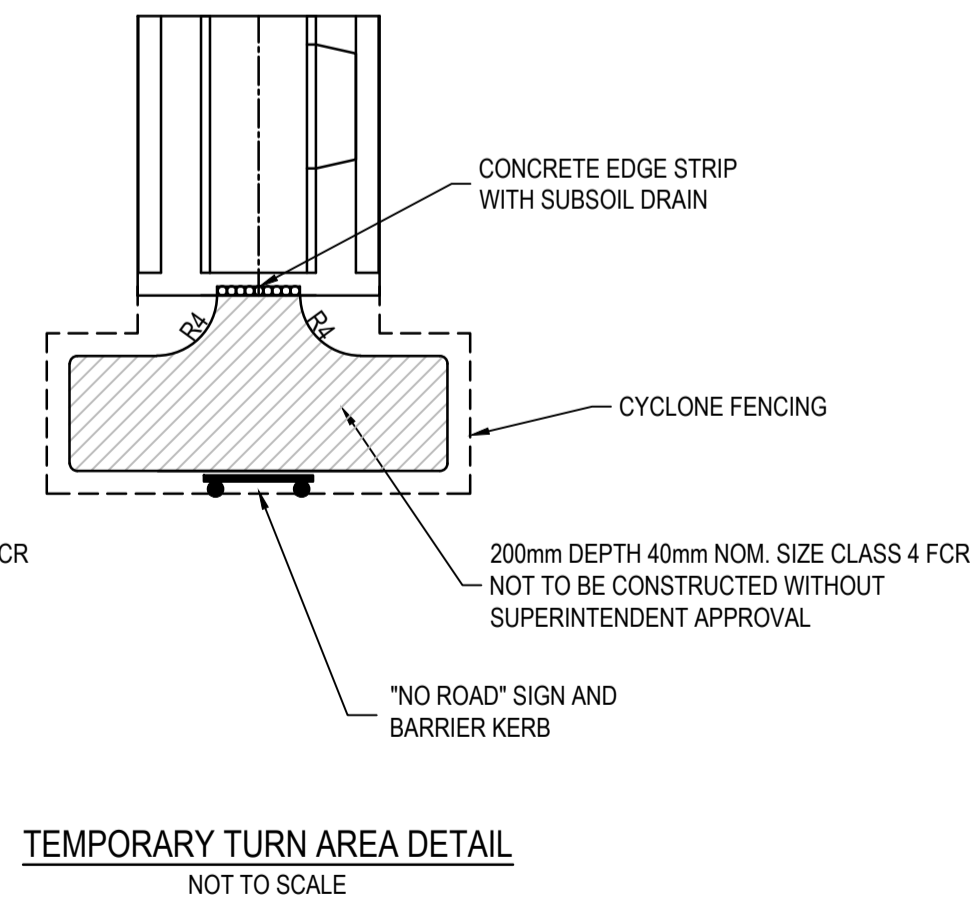
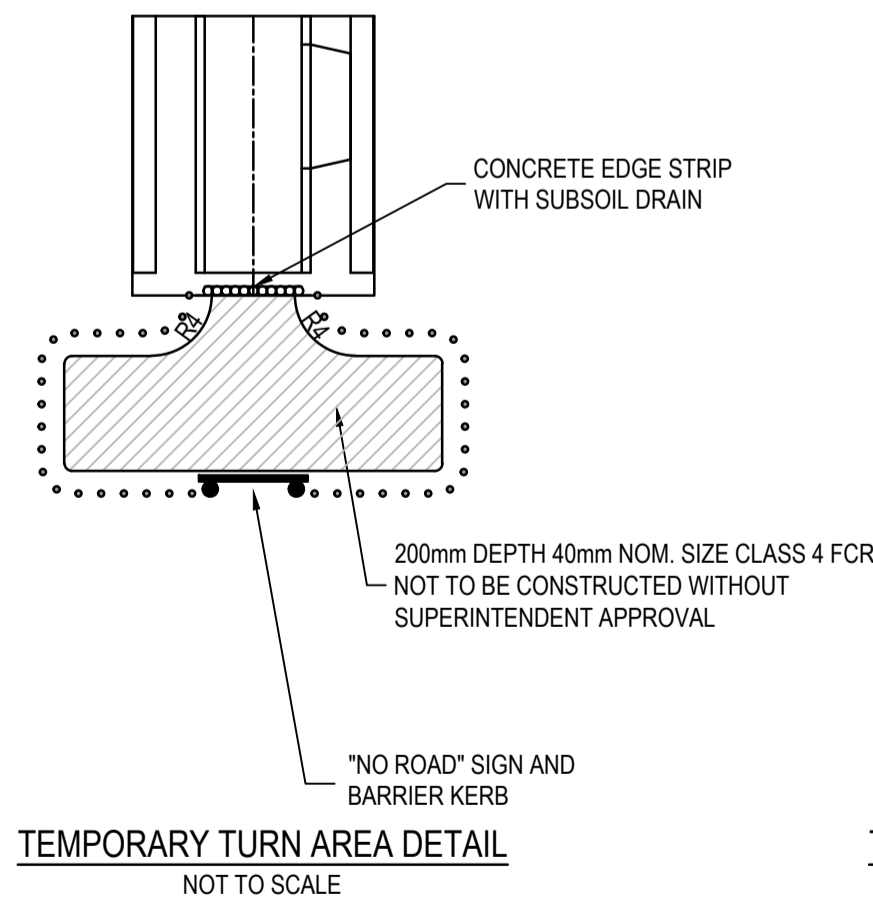


ROAD PAVEMENT COMPOSITION - ACCESS PLACE TYPE 2
(YARDING STREET, ACRES ROAD, BITTERN ROAD, TOPIARY WAY & TANNERY STREET)

780mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A ASPHALT WEARING COURSE	30	SIZE 10 TYPE L ASPHALT (CLASS 320 BINDER)
B ASPHALT BASE COURSE	30	SIZE 10 TYPE N ASPHALT (CLASS 320 BINDER)
C SAMII SEAL	6.7	SIZE 10 S18RF
D PRIME	YES	
E BASE COURSE	130	SIZE 20 CLASS 2 CRUSHED ROCK COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
F UPPER SUBBASE	110	CLASS 3 CRUSHED ROCK (OR HIGHER QUALITY MATERIAL) COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
G LOWER SUBBASE	180	CLASS 4 CRUSHED ROCK (OR HIGHER QUALITY MATERIAL) COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
H CAPPING LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY ks≤5x10 ⁻⁶ m/s COMPACTED TO 98% MDD (STANDARD)
I CONSTRUCTION LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY ks≤5x10 ⁻⁶ m/s COMPACTED TO 98% MDD (STANDARD)
J SUBGRADE		SUBGRADE CLAY AS FOUND (DESIGN CBR = 2% EXPANSIVE)



16m ACCESS STREET
TOPIARY WAY, TANNERY STREET, BITTERN ROAD, ACRES ROAD AND YARDING STREET



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

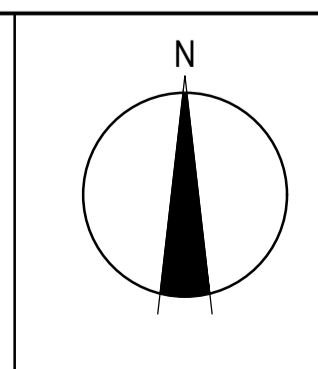
AS CONSTRUCTED PLANS
The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.

Quality Management ISO 9001
OH&S Management AS/NZS 4501
Environmental Management ISO 14001
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PLAN OF SUB. NO. PS900888F
PERMIT REF. NO. 719067

AS CONSTRUCTED

Scale 1:1000
Scale AS SHOWN AT 1



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

mirvac

Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Pavement Details

MELWAYS REF 8M2 PROJECT / DRAWING No. 1700E-024-411 SHEET No. 23 of 27 REVISION 2

THE FOLLOWING HAVE BEEN IDENTIFIED AS SIGNIFICANT ENVIRONMENTAL ASPECTS FOR THE SITE:
 • CHMP, REF. 12653_12112014
 • KANGAROO MANAGEMENT PLAN, REF. 6406_FINAL_24062016
 • RIVER RED GUM TREE MANAGEMENT PLAN, REF. 00853_22032018
 • CEMP, REF. 9930_FINAL(V1)_26102017
 THESE ASPECTS SHALL BE MANAGED WITH THE ENVIRONMENTAL PROTECTION MEASURES OUTLINED ON THIS PLAN.

I HAVE PREPARED THIS ENVIRONMENTAL MANAGEMENT PLAN AND AGREE TO UNDERTAKE WORKS AND ENSURE SUB-CONTRACTORS UNDERTAKE WORKS IN ACCORDANCE WITH THIS PLAN.

DEVELOPER Mirvac
 Level 5, Building Q3, 6 Riverside Quay
 Southbank VIC 3006
 NAME: Chris Kiparoglou
 0466 941 870
 chris.kiparoglou@mirvac.com

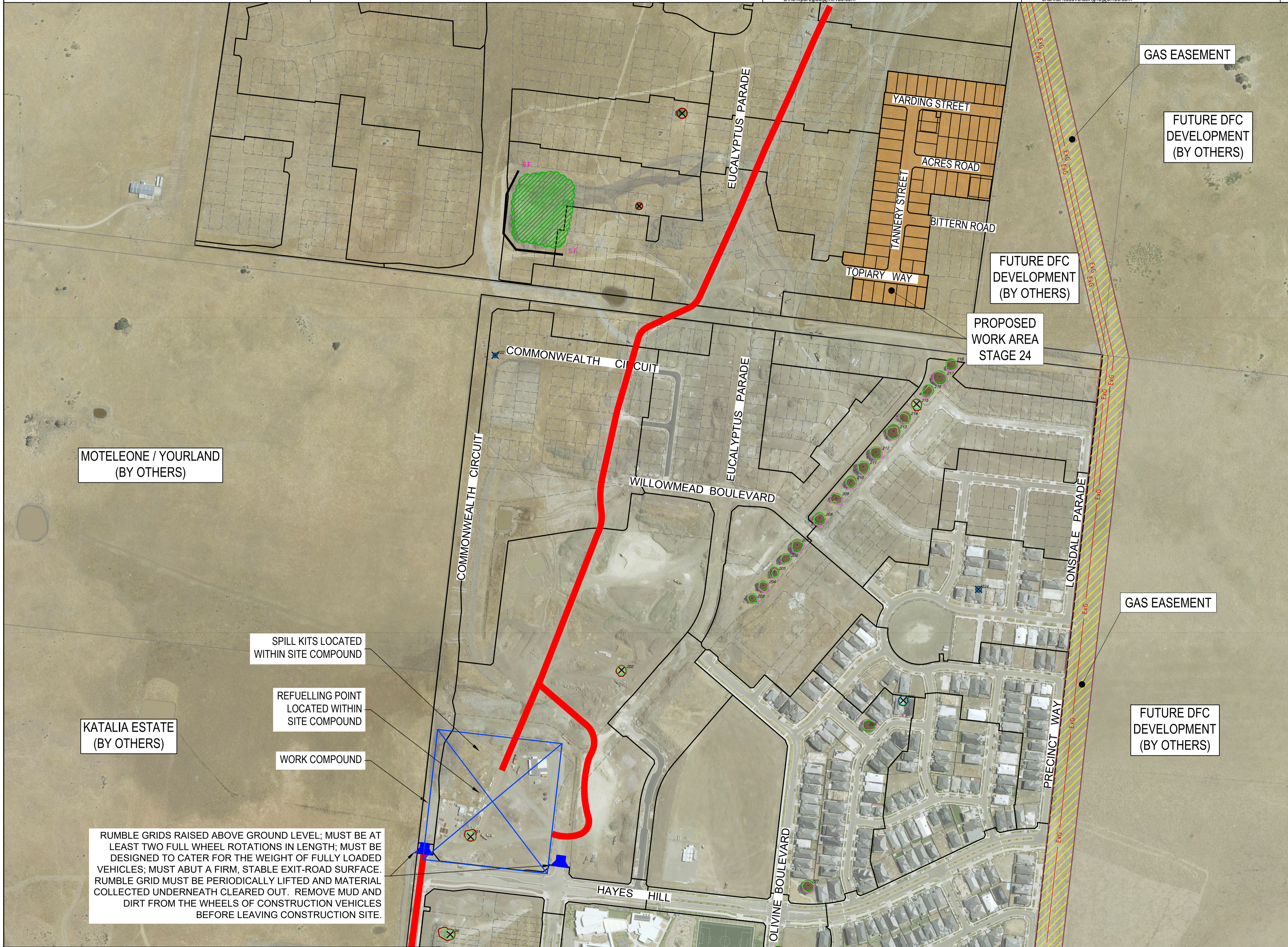
DATE:

CONSULTANT SMEC - URBAN DEVELOPMENT
 Collins Square, Tower 4, Level 20
 727 Collins St, Melbourne, VIC 3008
 NAME: Shankar Tisseverasinghe
 0434 581 518
 shankar.tisseverasinghe@smec.com

DATE:

CONTRACTOR Winslow Constructors Pty Ltd
 50 Barry Road
 Campbellfield VIC 3061
 NAME: Adam Stojanovski
 0427 446 501
 adams@winslow.com.au

DATE:



LEGEND - ENVIRONMENTAL MANAGEMENT PLAN	
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY	
	STORMWATER DRAINAGE PITS
	SWALE DRAIN
	EXISTING STORMWATER DRAINAGE PITS
	EXISTING SWALE DRAIN
	EXISTING RETAINING WALL
	SLEEPER RETAINING WALL
	ROCK RETAINING WALL
	TREE PROTECTION FENCING REFER ARBORICULTURE REPORT
	PROPOSED DRIVEWAY & FOOTPATH
	SILT FENCE OR SIMILAR APPROVED EROSION PROTECTION FENCE
	TEMPORARY CHAINWIRE FENCE
	EXISTING CHAINWIRE FENCE
	CATCH DRAIN ALONG LOW POINTS WITH SILT CURTAINS OR SIMILAR PLACED AT MIN. 150M
	SUGGESTED STOCKPILE LOCATION
	STORMWATER PIT PROTECTION
	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	VEGETATION TO BE REMOVED
	NO GO ZONE / GAS EASEMENT
	LOT GRADE DIRECTION OF FALL
	OVERLAND FLOW
	STABILIZED ACCESS POINT FITTED WITH MUD REMOVAL DEVICES
	SITE COMPOUND (INCLUDING WASTE STORAGE, BINS, SPILL KITS, WASH DOWN BAYS AND AMENITIES)
	HAUL ROADS
	EXISTING RED GUM TREE & CANOPY TO BE REMOVED
	EXISTING OTHER SPECIES TREE & CANOPY TO BE REMOVED

MOTELEONE / YOURLAND (BY OTHERS)

KATALIA ESTATE (BY OTHERS)

SPILL KITS LOCATED WITHIN SITE COMPOUND

REFUELLING POINT LOCATED WITHIN SITE COMPOUND

WORK COMPOUND

RUMBLE GRIDS RAISED ABOVE GROUND LEVEL; MUST BE AT LEAST TWO FULL WHEEL ROTATIONS IN LENGTH; MUST BE DESIGNED TO CATER FOR THE WEIGHT OF FULLY LOADED VEHICLES; MUST ABUT A FIRM, STABLE EXIT-ROAD SURFACE. RUMBLE GRID MUST BE PERIODICALLY LIFTED AND MATERIAL COLLECTED UNDERNEATH CLEARED OUT. REMOVE MUD AND DIRT FROM THE WHEELS OF CONSTRUCTION VEHICLES BEFORE LEAVING CONSTRUCTION SITE.

<p>AS CONSTRUCTED PLANS</p> <p>The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.</p>			<p>PLAN OF SUB. NO. PS900888F</p> <p>PERMIT REF. NO. 719067</p>		<p>Member of the Surlana Jurong Group ABN 47 065 475 149 Collins Square, Tower 4, Level 20, 727 Collins St Melbourne, VIC, 3008, Australia 03 9514 1500</p>		<p>Olivine Estate - Stage 24 Whittlesea City Council Road and Drainage Environmental Management Plan Overall Plan</p>	<p>MELWAYS REF 8M2</p>	<p>PROJECT / DRAWING No. 1700E-024-451</p>	<p>SHEET No. 24 of 27</p>	<p>REVISION 2</p>
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THE FOLLOWING HAVE BEEN IDENTIFIED AS SIGNIFICANT ENVIRONMENTAL ASPECTS FOR THE SITE:

- CHMP, REF. 12653_12112014
- KANGAROO MANAGEMENT PLAN, REF. 6406_FINAL_24062016
- RIVER RED GUM TREE MANAGEMENT PLAN, REF. 008833_22032018
- CEMP, REF. 9930_FINAL(V1)_26102017

THESE ASPECTS SHALL BE MANAGED WITH THE ENVIRONMENTAL PROTECTION MEASURES OUTLINED ON THIS PLAN.

I HAVE PREPARED THIS ENVIRONMENTAL MANAGEMENT PLAN AND AGREE TO UNDERTAKE WORKS AND ENSURE SUB-CONTRACTORS UNDERTAKE WORKS IN ACCORDANCE WITH THIS PLAN.

DEVELOPER Mirvac
Level 5, Building Q3, 6 Riverside Quay
Southbank VIC 3006
NAME: Chris Kiparoglou
0466 941 870
chris.kiparoglou@mirvac.com

CONSULTANT SMEC - URBAN DEVELOPMENT
Collins Square, Tower 4, Level 20
727 Collins St, Melbourne, VIC 3008
NAME: Shankar Tisseverasinghe
0434 581 518
shankar.tisseverasinghe@smec.com

CONTRACTOR Winslow Constructors Pty Ltd
50 Barry Road
Campbellfield VIC 3061
NAME: Adam Stojanovski
0427 446 501
adams@winslow.com.au

MANAGEMENT

1. RESPONSIBILITIES: Civil Contractor: WINSLOW CONSTRUCTORS PTY LTD Superintendent: SMEC Site Responsibilities Contact: Adam Stojanovski (Winslow) - 0427 446 501 EMERGENCY CONTACTS: 1. SHANKAR TISSEVERASINGHE - (03) 9880947 2. JASON EDGE - (03) 9541512	4. STAGING OF WORKS: - DEVELOPMENT SEQUENCING MUST BE IN ACCORDANCE WITH THE ENDORSED PRECINCT INFRASTRUCTURE AND STAGING PLAN (UNLESS OTHERWISE AGREED IN WRITING BY THE RESPONSIBLE AUTHORITY). - ENVIRONMENTAL PROTECTION DEVICES ARE TO BE INSTALLED PRIOR TO CIVIL WORKS COMMENCING ON SITE
2. COMMUNICATION OF EMP REQUIREMENTS: - INDUCTION OF ALL PERSONS WORKING ON SITE REGARDING REQUIREMENTS AS SET OUT ON THE EMP - EMP TO BE DISPLAYED IN VISIBLE LOCATION WITHIN SITE COMPOUND EG. ON WALLS OF SITE SHEDS / OFFICE	5. INFORMING RESIDENTS: AS REQUIRED
3. INSPECTIONS AND MAINTENANCE: - SEDIMENT AND EROSION CONTROL MEASURES TO BE INSPECTED WEEKLY - PRIOR TO AND AFTER STORM EVENT AND/OR HEAVY RAIN - SEDIMENT CONTROLS ARE TO BE REPAIRED AND RECTIFIED IMMEDIATELY WHEN FAILURES ARE IDENTIFIED	6. ASSOCIATED DOCUMENTS: PERMIT 719067, BUSHFIRE MANAGEMENT PLAN, EPA PUBLICATION 1834, CHMP REF 12653_12112014, KANGAROO MANAGEMENT PLAN REF 6406_FINAL_24062016, RIVER RED GUM TREE MANAGEMENT PLAN REF 008833_22032018, CEMP REF 9930_FINAL(V1)_26102017, INSPECTION LOGS, MSDS AND OTHER DOCUMENTS AS REQUIRED

NOISE RISK: SIGNIFICANT
REQUIREMENT:
EPA VICTORIA AND COUNCIL REQUIREMENTS MUST BE ADHERED TO IN RELATION TO THE LEVEL OF NOISE AND WORKING HOURS, TO ENSURE THAT RESIDENTS AND OTHER APPLICABLE NEIGHBOURS TO THE SITE ARE NOT DISTURBED UNREASONABLY. THE GENERATION OF NOISE MUST BE MINIMISED.

7. WORKING HOURS: 08:00 TO 16:30 MON - FRI 09:00 TO 13:00 SATURDAY

8. NOISE MINIMISATION METHODS:
- MAINTAIN WORKING HOUR
- RESTRICT USE OF NOISY EQUIPMENT AND PROCESSES TO AVOID DISTURBANCES TO ADJACENT RESIDENTS.
- FOLLOW EPA NOISE CONTROL GUIDELINES - T630292

DUST RISK: SIGNIFICANT
REQUIREMENT:
DUST GENERATION MUST BE MINIMISED TO ENSURE THERE IS NO HEALTH RISK OR LOSS OF AMENITY.

10. MINIMISING DUST GENERATION:
- AVOID STRIPPING LARGE AREAS OF THE SITE WHEN NOT REQUIRED
- WATER SPRAYING AS REQUIRED
- MINIMISE STRIPPED AREAS
- MINIMISE ACTIVITIES ON HIGH WIND DAYS
- ASSESS RISK FACTORS AND MITIGATION STRATEGIES AS PER SPECIFICATIONS IN APPROVED DUST MANAGEMENT PLAN

11. DUST SUPPRESSION:
- WATER SPRAYING
- REDUCE ACTIVITY ON WINDY DAYS
- ASSESS RISK FACTORS AND MITIGATION STRATEGIES AS PER SPECIFICATIONS IN APPROVED DUST MANAGEMENT PLAN

EROSION AND SEDIMENT RISK: SIGNIFICANT
REQUIREMENT:
EROSION AND SEDIMENT MUST BE MANAGED IN ACCORDANCE WITH CURRENT BEST PRACTICE ENVIRONMENTAL MANAGEMENT PRACTICES, TO PREVENT SEDIMENT LOADED WATER FROM ENTERING ANY DRAINAGE SYSTEM OR NATURAL WATERWAY

14. DRAINAGE MANAGEMENT:
- STORMWATER FLOWING ONTO SITE WILL BE CONTROLLED BY CUT SWALES/ DRAINS AND SILT FENCE OR OTHER CONTROLS TO FILTER PLAN WHERE APPLICABLE
- ENSURE STORMWATER PITS AND DRAINS ARE PROTECTED FROM SILT/SEDIMENT BY USING APPROPRIATE METHODS. REFER TO SHEET 1700E-024-456 FOR DETAILS.

15. SOIL STABILISATION DURING CONSTRUCTION:
GRADE AND SEAL SOIL AS REQUIRED, RE-INSTATE DISTURBED AREAS AS SOON AS PRACTICAL.

POST WORKS:
- SITE MATTING RETAINED.
- TOPSOILING AND GRASSING DISTURBED SOIL AREAS TO BE CARRIED OUT AS SOON AS PRACTICAL.

16. STOCKPILE PROTECTION:
- SILT FENCES TO BE ERRECTED AROUND THE DOWNSTREAM SIDE OF STOCKPILES WHERE APPLICABLE. STOCKPILES TO BE PLACED AWAY FROM DRAINAGE INLETS, OPEN DRAINS, WATER COURSES & PAVED AREAS. A CUT-OFF DRAIN WITH EARTH BUND TO BE INSTALLED ON THE UPSLOPE SIDE OF THE STOCKPILE TO DIVERT RUN-OFF AWAY FROM THE STOCKPILE. MINIMISE THE NUMBER OF STOCKPILES WHERE POSSIBLE.
- STOCKPILES - 5m MAXIMUM HEIGHT, 2:1 BATTERS, 10m MINIMUM SETBACK FROM ADJACENT PROPERTIES, 30m MINIMUM SETBACK FROM WATERWAYS (NATURAL OR MAN-MADE).
- TEMPORARY GRASSING OF STOCKPILES > 14DAYS.

19. VEHICLE AND ROAD MANAGEMENT, SITE ACCESS:
- REFER TO OVERALL PLAN FOR ACCESS POINTS
- CONTRACTORS TO ENSURE THERE IS SPACE FOR VEHICLE CLEANING NEARBY
- HAVE A DEDICATED BUNDED CLEANING AND WASHING UP AREA ON SITE, AWAY FROM ALL STORMWATER DRAINS.
CLEANING VEHICLES:
ALL VEHICLES LEAVING THE SITE MUST REMOVE ANY EXCESS SEDIMENTS/CLAY COLLECTED ON THE VEHICLES WHILST ON SITE. EACH OPERATOR MUST MANUALLY REMOVE EXCESS CLAY SUCH THAT IT MINIMISES DEPOSITS ON THE ROAD.

WASTE RISK: SIGNIFICANT
REQUIREMENT:
LITTER AND WASTE MUST BE CONTAINED ON SITE, BEFORE DISPOSAL IN A RESPONSIBLE MANNER. WASTE GENERATION MUST BE MINIMISED

21. MOVEMENT OF SOIL CONTAMINANT STATUS: CLEAN
23. WASTE STORAGE AND DISPOSAL:
- WASTE BINS TO BE PLACED IN COMPOUND FRO DAILY RUBBISH AND REMOVED OFFSITE AS REQUIRED.
- BINS TO BE LIDDED
- SITE MUST BE KEPT FREE OF LITTER - ANY VISIBLE LITTER ON SITE MUST BE COLLECTED DAILY.

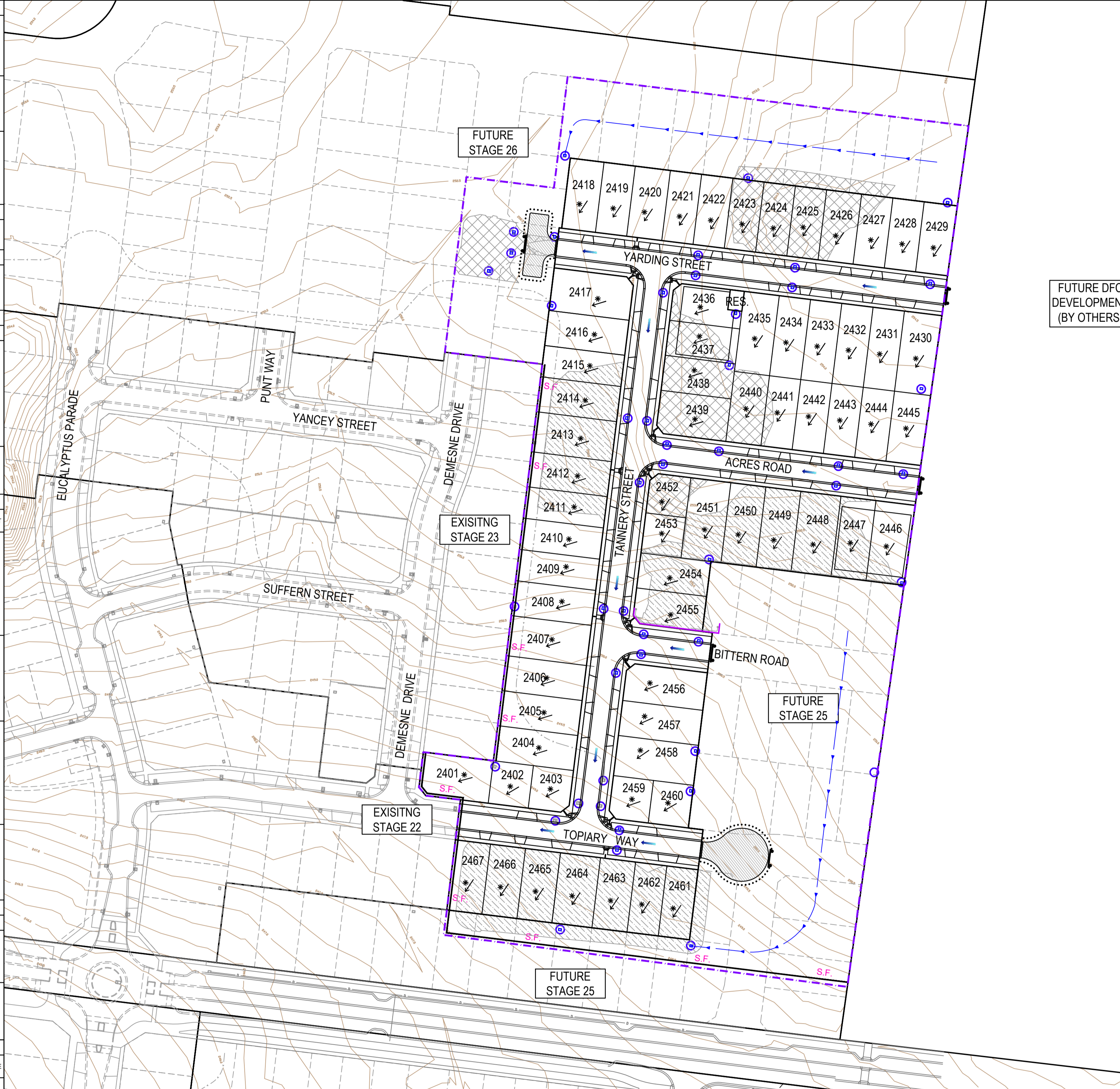
22. WASTE MINIMISATION METHODS:
- THE COLLECTION OF SURVEY PEGS AND OTHER MATERIALS ARE TO BE COLLECTED AND RE-USED ONSITE AND RECYCLED FRO FUTURE PROJECTS
- MATERIALS TO BE STORED IN COMPOUND OR SITE CONTAINER.

CHEMICALS RISK: SIGNIFICANT
REQUIREMENT:
STORAGE AND SPILL MANAGEMENT PRACTICES MUST BE IMPLEMENTED TO ENSURE THAT NO ENVIRONMENTAL DAMAGE CAN RESULT FROM THE ESCAPE OR SPILLAGE OF CHEMICALS OR FUELS.

25. STORAGE:
- MINIMAL QUANTITIES STORED IN SITE CONTAINER
- ALL FUELS, OILS, CHEMICALS AND OTHER HAZARDOUS MATERIALS MUST BE STORED IN APPROPRIATE DESIGNATED AND BUNDED AREA ENSURE THAT THE CAPACITY OF THE BUNDED AREA IS ADEQUATE FOR THE VOLUME OF STORED CHEMICALS/FUELS.

27. REFUELLING PROCEDURE:
- ALL REFUELLING TO BE CARRIED OUT BY EXTERNAL CONTRACTOR WITH PROCEDURES AND SPILL KITS AVAILABLE DURING REFUELLING.
- REFER TO OVERALL PLAN FOR REFUELLING POINT
- ALL REFUELLING AND OTHER HAZARDOUS MATERIALS MUST BE DONE ONLY WITHIN APPROPRIATE BUNDED OR PORTABLE SEALED BUNDED AREA
- AVOID REFUELLING WITHIN MINIMUM 10M OF ANY DRAINAGE INLET, OPEN DRAIN, WETLAND, WATERWAY OR ANY PROTECTED AREA SUCH AS CONSERVATION AREAS, TREE PROTECTION ZONES AND RECREATIONAL INFRASTRUCTURE.

26. SPILL MANAGEMENT:
- SEE ITEM 27, REFUELLING UNDERTAKEN BY EXTENDED FUEL CONTRACTOR WHO CARRIES ALL THE REQUIRED SPILL KITS ETC
- IMMEDIATELY CLEAN UP ALL SPILLS TO PREVENT CONTAMINATION OF SOIL & WATER COURSE
- ALL SPILLS MUST BE REPORTED TO THE SUPERINTENDENT AND RELEVANT AUTHORITIES.



FUTURE DFC DEVELOPMENT (BY OTHERS)

LEGEND - ENVIRONMENTAL MANAGEMENT PLAN
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY

	STORMWATER DRAINAGE PITS
	SWALE DRAIN
	EXISTING STORMWATER DRAINAGE PITS
	EXISTING SWALE DRAIN
	EXISTING RETAINING WALL
	SLEEPER RETAINING WALL
	ROCK RETAINING WALL
	PROPOSED DRIVEWAY & FOOTPATH
	SILT FENCE OR SIMILAR APPROVED EROSION PROTECTION FENCE
	TEMPORARY CHAINWIRE FENCE
	EXISTING CHAINWIRE FENCE
	CATCH DRAIN ALONG LOW POINTS WITH SILT CURTAINS OR SIMILAR PLACED AT MIN. 150M
	SUGGESTED STOCKPILE LOCATION
	STORMWATER PIT PROTECTION
	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	VEGETATION TO BE REMOVED
	NO GO ZONE / GAS EASEMENT
	LOT GRADE DIRECTION OF FALL
	OVERLAND FLOW
	STABILIZED ACCESS POINT FITTED WITH MUD REMOVAL DEVICES
	SITE COMPOUND (INCLUDING WASTE STORAGE, BINS, SPILL KITS, WASH DOWN BAYS AND AMENITIES)

GAS AND DUST MANAGEMENT NOTES
ALL WORKS TO BE UNDERTAKEN SHOULD REFER TO SMEC DUST MANAGEMENT PLAN REPORT DATED 20TH SEPTEMBER 2019 AND SMEC CONSTRUCTION MANAGEMENT PLAN WORKS IN VICINITY OF GAS TRANSMISSION MAIN DATED 3RD OCTOBER 2019.

28. OTHER:
N/A

SIGNIFICANT FLORA / FAUNA RISK: SIGNIFICANT
REQUIREMENT:
ALL SIGNIFICANT FLORA AND FAUNA ON AND ADJACENT TO THE SITE MUST BE PROTECTED

ARCHAEOLOGICAL / HERITAGE RISK: SIGNIFICANT
REQUIREMENT:
PLACES, SITES AND OBJECTS OF ARCHAEOLOGICAL OR HERITAGE SIGNIFICANCE MUST BE PROTECTED

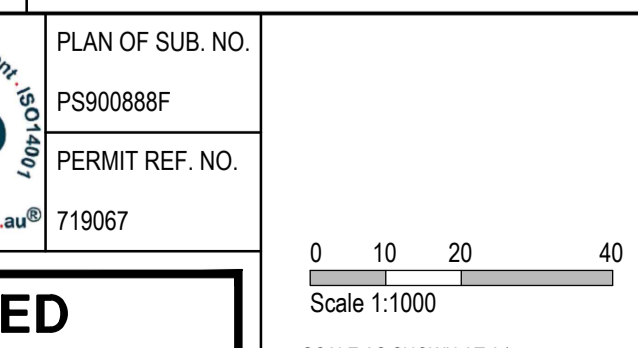
30. YES/NO - DETAILS:
31. REQUIREMENT:
32. REQUIREMENT:

AS CONSTRUCTED PLANS
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OHS Management AS/NZS 4501
Environmental Management ISO 14001
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PLAN OF SUB. NO. PS900888F
PERMIT REF. NO. 719067

AS CONSTRUCTED



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mirvac

Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Environmental Management Plan
Layout Plan

MELWAYS REF: 8M2 PROJECT / DRAWING No: 1700E-024-452 SHEET No: 25 of 27 REVISION: 2

RISK ASSESSMENT CHECKLIST	
NOISE ISSUES: - NATURE OF NOISE GENERATING WORKS: VEHICLES, FIXED MACHINERY, CONSTRUCTION ACTIVITIES. - POTENTIAL NOISE RECEPTORS: SURROUNDING RESIDENTS / CONTRACTORS: - PROXIMITY OF WORKS TO NOISE RECEPTORS: ADJACENT RESIDENTS - THE RESIDENTS OF CRESSY WAY & EMINENCE DRIVE LIVE, 100m FROM THE SITE	LIKELIHOOD LIKELY CONSEQUENCE MAJOR OVERALL RISK LOW
DUST ISSUES: - DUST SOURCES: MOVEMENTS OF VEHICLES - POTENTIAL DUST RECEPTORS: SURROUNDING RESIDENTS / CONTRACTORS - PROXIMITY OF WORKS TO DUST RECEPTORS: ADJACENT RESIDENTS - EXTENT OF EXPOSED EARTH AND DURATION OF TIME EXPOSED: DURATION OF STAGED WORKS - WIND CONDITIONS:	LIKELIHOOD LIKELY CONSEQUENCE MAJOR OVERALL RISK LOW
EROSION AND SEDIMENT ISSUES: - EROSION AND SEDIMENT SOURCES: EXPOSED TOPSOIL - POTENTIAL EROSION AND SEDIMENT RECEPTORS: STORMWATER SYSTEM, CREEK SYSTEM. - PROXIMITY OF WORKS TO EROSION AND SEDIMENT RECEPTORS: ADJACENT RESIDENTS - EXTENT OF EXPOSED EARTH AND DURATION OF TIME EXPOSED: AREA APPROXIMATELY 5 HA EXPOSED FOR 8 MONTHS. - SLOPE: MINIMAL - 3 METRES OVER 250M - SITE DRAINAGE REGIME: SURFACE SWALES AND UNDERGROUND DRAINAGE - RAINFALL: 400 - 600MM / YEAR - VEHICLE MOVEMENTS ON AND OFF SITE: TO BE KEPT TO A MINIMUM AND VIA A SINGLE ENTRY / EXIT.	LIKELIHOOD LIKELY CONSEQUENCE MAJOR OVERALL RISK LOW
WASTE ISSUES: - NATURE OF WASTE TO BE GENERATED: BUILDING AND CONSTRUCTION PRODUCTS, LITTER. - PRESENCE OF WASTE ON SITE PRIOR TO WORK COMMENCEMENT: EXISTING SHEDS. - POTENTIAL WASTE RECEPTORS: SURROUNDING RESIDENTS. - PROXIMITY TO POTENTIAL WASTE RECEPTORS: ADJACENT RESIDENTS - THE RESIDENTS AT CRESSY WAY & EMINENCE DRIVE LIVE < 100M FROM THE SITE	LIKELIHOOD LIKELY CONSEQUENCE MAJOR OVERALL RISK LOW
CHEMICALS ISSUES: - TYPES OF CHEMICALS AND FUELS USED AND/OR STORED ON SITE: REFER TO MATERIAL SAFETY DATA SHEET (MSDS) - QUANTITIES OF CHEMICALS AND FUELS USED AND/OR STORED ON SITE: REFER TO MATERIAL SAFETY DATA SHEET (MSDS) - POTENTIAL CHEMICAL RECEPTORS: SURROUNDING RESIDENTS / CONTRACTORS / WATERWAYS - PROXIMITY TO POTENTIAL CHEMICAL RECEPTORS: 200 METRES	LIKELIHOOD LIKELY CONSEQUENCE MAJOR OVERALL RISK LOW
SIGNIFICANT FLORA/FAUNA ISSUES: - TYPES OF FLORA/FAUNA: NIL - VULNERABILITY OF FLORA/FAUNA: NIL - PROXIMITY OF FLORA/FAUNA TO WORKS: NIL - WORK ACTIVITIES WHICH MAY THREATEN FLORA/FAUNA: NIL - POTENTIAL IMPACTS ON FLORA/FAUNA: NIL - REFER TO 0697-06-81, ITEM No.29 FOR DETAILS.	LIKELIHOOD LIKELY CONSEQUENCE MAJOR OVERALL RISK LOW
ARCHAEOLOGICAL/HERITAGE ISSUES: - TRADITIONAL LAND OWNERS CONSULTED? YES - SURVEY OR ASSESSMENT CONDUCTED? YES - PROBABILITY OF ENCOUNTERING ARCHAEOLOGICAL/HERITAGE ITEMS DURING WORKS: LOW - TYPES OF ARCHAEOLOGICAL/HERITAGE ITEMS ON SITE: NIL - PROXIMITY OF ARCHAEOLOGICAL/HERITAGE ITEMS TO WORKS ON SITE: NIL - WORK ACTIVITIES WHICH MAY THREATEN ARCHAEOLOGICAL/HERITAGE ITEMS: NIL - REFER TO 0697-06-81, ITEM No.30 FOR DETAILS.	LIKELIHOOD LIKELY CONSEQUENCE MAJOR OVERALL RISK LOW

I HAVE PREPARED THIS ENVIRONMENTAL MANAGEMENT PLAN AND AGREE TO UNDERTAKE WORKS AND ENSURE SUB-CONTRACTORS UNDERTAKE WORKS IN ACCORDANCE WITH THIS PLAN.

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CONTRACTOR Winslow Constructors Pty Ltd
 50 Barry Road
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ENVIRONMENTAL PROTECTION MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING DESIGNS.

GEOTEXTILE INLET GUARD - PHASE B**

CONSTRUCTION NOTES:

- WHERE POSSIBLE LOCATE STOCKPILE AT LEAST 5 METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOWS, ROADS AND HAZARD AREAS.
- CONSTRUCT ON THE CONTOUR AS A LOW, FLAT, ELONGATED MOUND.
- WHERE THERE IS SUFFICIENT AREA TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
- REHABILITATE IN ACCORDANCE WITH THE SWMP/ESCP.
- CONSTRUCT EARTH BANK (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE AND A SEDIMENT FENCE (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE OF STOCKPILE.
- THE PLACEMENT OF FILL MUST BE DESIGNED TO ENSURE THAT IT DOES NOT COMPROMISE NATIVE VEGETATION TO BE PROTECTED.
- SOIL MUST NOT BE STOCKPILED ON NATIVE VEGETATION

STOCKPILES

CONSTRUCTION NOTES:

- WHERE POSSIBLE LOCATE STOCKPILE AT LEAST 5 METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOWS, ROADS AND HAZARD AREAS.
- CONSTRUCT ON THE CONTOUR AS A LOW, FLAT, ELONGATED MOUND.
- WHERE THERE IS SUFFICIENT AREA TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
- REHABILITATE IN ACCORDANCE WITH THE SWMP/ESCP.
- CONSTRUCT EARTH BANK (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE AND A SEDIMENT FENCE (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE OF STOCKPILE.
- THE PLACEMENT OF FILL MUST BE DESIGNED TO ENSURE THAT IT DOES NOT COMPROMISE NATIVE VEGETATION TO BE PROTECTED.
- SOIL MUST NOT BE STOCKPILED ON NATIVE VEGETATION

SILT/DRIFT FENCE - PHASE A**

CONSTRUCTION NOTES:

- CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
- CUT A 150MM DEEP TRENCH ALONG THE UPSIDE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
- DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS
- FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150MM OVERLAP.
- BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.
- SEDIMENT FENCE ENDS TO BE BOWED UPSLOPE. SEDIMENT FENCES REQUIRE DESILTING (REMOVAL OF COLLECTED SEDIMENT) WHEN SEDIMENT HAS BUILT UP TO 1/3 THE HEIGHT OF THE MEASURE OR WHEN BUILT UP SEDIMENT IS PREVENTING THE FENCE FROM WORKING EFFECTIVELY

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

PRELIMINARY
 NOT APPROVED FOR CONSTRUCTION
 THIS PLAN HAS BEEN PREPARED FOR INFORMATION ONLY IN ACCORDANCE WITH CLAUSE XX
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCING THE FINAL EMP AS PART OF THE LUMP SUM PRICE FOR THE WORKS

TREE PROTECTIVE FENCING

TREE PROTECTION/NO-GO FENCING

- ALL INDIGENOUS TREES TO TWICE THE CANOPY
- PROTECTIVE FENCING (HIGHLY VISIBLE) AROUND TWICE THE CANOPY DISTANCE OF EACH SCATTERED TREE AND MORE THAN 2 METRES FROM AREAS OF NATIVE VEGETATION IDENTIFIED TO BE PROTECTED.
- SIGNAGE MUST BE ATTACHED TO FENCE AT REGULAR INTERVALS
- SIGNAGE MUST READ "TREE PROTECTION ZONE. NO ENTRY EXCEPT TO AUTHORISED PERSONNEL. FINES SHALL BE IMPOSED FOR REMOVAL OR DAMAGE OF FENCING AND/OR TREES"

CONSTRUCTION NOTES:

- CHAIN WIRE MESH PANELS WITH SHADE CLOTH (IF REQUIRED) ATTACHED, HELD IN PLACE WITH CONCRETE FEET.
- ALTERNATIVE PLYWOOD OR WOODEN PALING FENCE PANELS. THIS FENCING MATERIAL ALSO PREVENTS BUILDING MATERIALS OR SOIL ENTERING THE TPZ.
- MULCH INSTALLATION ACROSS SURFACE OF TPZ (AT THE DISCRETION OF THE PROJECT ARBORIST). NO EXCAVATION, CONSTRUCTION ACTIVITY, GRADE CHANGES, SURFACE TREATMENT OR STORAGE OF MATERIALS OF ANY KIND IS PERMITTED WITHIN THE TPZ.
- BRACING IS PERMISSIBLE WITHIN THE TPZ. INSTALLATION OF SUPPORTS SHOULD AVOID DAMAGING ROOTS.

INLET FILTER BAG - PHASE B**

OTHER ISSUES 1	
ISSUES: ALL CONTRACTORS TO IMPLEMENT AND ADHERE TO THE GUIDELINES AS DESCRIBED WITHIN THIS EMP. PLEASE REFER TO ALL ASSOCIATED DOCUMENTS AND DETAILED DESIGN DRAWINGS FOR EXACT LOCATION OF ELEMENTS. ALL CONTRACTORS TO IMPLEMENT, MONITOR AND REVIEW ENVIRONMENTAL PROTECTIVE MEASURES ON A STAGE BY STAGE BASIS.	LIKELIHOOD LIKELY CONSEQUENCE MAJOR OVERALL RISK LOW

OTHER ISSUES 2	
ISSUES:	LIKELIHOOD LIKELY CONSEQUENCE MAJOR OVERALL RISK LOW

AS CONSTRUCTED PLANS

The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.

			PLAN OF SUB. NO. PS900888F PERMIT REF. NO. 719067
AS CONSTRUCTED			

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Olivine Estate - Stage 24
 Whittlesea City Council
 Road and Drainage
 Environmental Management Plan
 Details Plan

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-024-456	SHEET No. 26 of 27	REVISION 1
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PHASE	DISCIPLINE CODE	POTENTIAL RISK (Construction, Operations, Maintenance)	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		
Road Furniture / Roadside Features													
Construction	RD	Roads	Construction close to live traffic	New works will be constructed adjacent to live traffic when abutting existing stages.	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	Roads	Culverts	Potential risk from culverts under construction and height / fall hazards	Contractor	Falling from a height	Temporary barriers to be provided	Temporary barrier provided in contract	N	2	5	10	Constructor
Construction	US	Utilities or Services	Utilities become a hazard within clear zones	Vehicle conflict with utility / pit	Contractor	Personal injury, vehicle damage	Sequence works and protect with temp barrier or traffic control (TCP)	TCP provided within contract	N	1	5	5	Constructor
Operational	RD	Roads	Sight Lines	Inadequate drivers response time.	Road Authority	Increased potential for accidents	Ensure design complies with relevant standard. Undertake thorough Safety Audit	Vis lines checked and discussed with approval authority as part of design approval process	N	1	4	4	Road Authority
Operational	LS	Lines and Signs	Signs and street lights	Potential for drivers / riders to strike signs and street lights	Road Authority	Increased potential for accidents	Ensure design complies with relevant standard. Undertake thorough Safety Audit	Refer to appropriate standard for sign and lighting offsets	N	1	4	4	Road Authority
Operational	RF	Road Furniture	Headwalls	Potential vehicle conflict within clear zone	Road Authority	Increased potential for accidents	Establish adequate clear zone provision	Adequate barrier provided as per appropriate standard where within clear zone. Culvert headwall selection in accordance with authority standard	N	2	4	8	Road Authority
Operational	RD	Roads	Culverts	Potential fall hazard during maintenance, by vehicles and pedestrians	Relevant Authority	Falling from a height	Barriers to be provided in accordance with road standards	Barriers to be provided and safe batter slopes (>1:3)	N	2	5	10	Constructor
Retaining Walls													
Construction	RW	Retaining Walls	Retaining Wall Alignment	Falling from height during construction or commissioning of walls and adjacent structures eg. sewer manholes	Contractor	Falling from a height	Provide temporary and permanent fencing at top of wall.	Provide fencing (at heights) during design process	N	1	1	1	Constructor
Operational	RW	Retaining Walls	Retaining Wall Alignment	Lack of safe access/setback from road	Road/ Local Authority	Increased potential for accidents	Establish adequate and accessible clear zone provision. Provide guardrail where required	Wall located in suitable position during design process and approved by authority	N	1	1	1	Authority
Operational	RW	Retaining Walls	Retaining Wall Height	Potential for falling from height	Road/ Local Authority	Personal injury	Provide temporary and permanent fencing at top of wall.	Provide fencing (at heights) during design process	N	1	5	5	Authority
Operational	RW	Retaining Walls	Retaining Wall Design	Potential for wall failure	Road/ Local Authority	Increased potential for accidents	Structural design in accordance with standards, geotechnical conditions, end use and good practise.	Refer to structural drawings and calculations	N	1	5	5	Authority
Drainage													
Operational	DR	Drainage	Grated Pits	Trip/fall hazard with large spaced grate	Relevant Authority	Increased potential for accidents	Provide pedestrian/bicycle friendly grates where applicable. Refer to pit schedule	Design in accordance with authority and manufacturers standards	N	3	2	6	Authority
Operational	DR	Drainage	Non Standard Large Pits	Potential for pit failure	Relevant Authority	Increased risk to maintenance crews/ vehicles	Structural design in accordance with relevant design principles.	Refer to structural drawings and calculations	N	1	4	4	Authority
Operational	DR	Drainage	Culvert Endwalls/Headwalls	Potential for falling from height	Relevant Authority	Increased potential for accidents	Fencing to be provided where culverts/headwalls are at height in accordance with relevant authority standards	Allow for fencing in Design Process	N	1	4	4	Authority
Operational	DR	Drainage	Culvert Endwall/Headwall Outlets	Children playing in large pipes / watercourses and access for maintenance	Relevant Authority	Increased potential for accidents	Grate provided to authority standards	Design in accordance with authority and manufacturers standards	N	2	5	10	Authority
Maintenance	DR	Drainage	Access to Pits	Lack of safe access for maintenance	Relevant Authority	Increased risk to maintenance crews	Provide safe working conditions for maintenance. Provide safe landing/ access arrangements as per relevant authority standards	Where possible design pit in location for easy access and outside of permanent water bodies	N	2	5	10	Authority
Maintenance	DR	Drainage	Deep Pits	Lack of safe entry for maintenance	Relevant Authority	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	Design in accordance with authority standards	N	1	5	5	Authority
Maintenance	DR	Drainage	Access to drains / culverts	Lack of safe access for maintenance	Relevant Authority	Increased risk to maintenance crews	Provide safe working conditions for maintenance. Access as approved by authority	Design pit in location for easy access as agreed with authority	N	2	3	6	Authority
Sewer													
Construction	SE	Sewer	Sewer Manhole located adjacent to Retaining Wall Alignment	Falling from height during construction or commissioning of adjacent sewer manholes	Contractor	Falling from a height	Provide temporary fencing until such time that permanent fencing is constructed	Provide fencing (at heights) during design process	N	1	1	1	Constructor
Maintenance	SE	Sewer	Deep Manholes	Lack of safe entry for maintenance	Relevant Authority	Increased potential for accidents	Contractor to be certified for work in confined spaces, landings and step access provided as per authority standards and schedule	Design in accordance with authority standards. Refer pit schedule on drawings	N	1	5	5	Authority
Maintenance	SE	Sewer	Access to Manholes	Lack of safe access for maintenance	Relevant Authority	Increased risk to maintenance crews	Provide safe working conditions for maintenance. Manholes located in compliance with authority standards	Where possible design manhole in location for easy access	N	1	5	5	Authority
Maintenance	SE	Sewer	Pump Station Access	Lack of safe access for maintenance	Relevant Authority	Increased risk to maintenance crews	Provide safe working conditions for maintenance	Design pump station in location for easy access	N	2	4	8	Authority
Electricity													
Operational	ES	Electrical Services	Electrical Design	Location of assets within clear zones e.g. pits/ substations	Relevant Authority	Increased potential for accidents	Electrical designed by sub consultant with appropriate accreditation and in accordance with authority standards	Pits designed below ground. Where above ground adequate offset from vehicle clear zones has been provided or barrier protection provided	N	2	3	6	Authority
Telstra													
Operational	TE	Telstra	Telstra Design	Location of assets within clear zones e.g. pits	Relevant Authority	Increased potential for accidents	Telecommunications designed by authority consultant with appropriate accreditation and in accordance with authority standards	Pits designed below ground. Where above ground adequate offset from vehicle clear zones has been provided or barrier protection provided	N	2	3	6	Authority
Water													
Operational	WA	Water	Water Design	Location of assets within clear zones e.g. pits/ substations	Relevant Authority	Increased potential for accidents	Water pits designed in accordance with authority standards	Pits designed below ground. Where above ground adequate offset from vehicle clear zones has been provided or barrier protection provided	N	2	3	6	Authority
Gas													
Operational	GA	Gas	Gas Design	Location of assets within clear zones e.g. pits/ substations	Relevant Authority	Increased potential for accidents	Water pits designed in accordance with authority standards	Pits designed below ground. Where above ground adequate offset from vehicle clear zones has been provided or barrier protection provided	N	1	1	1	Authority

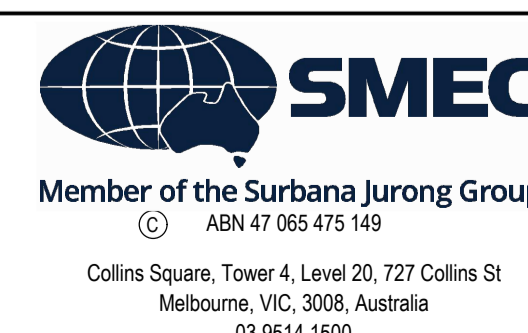
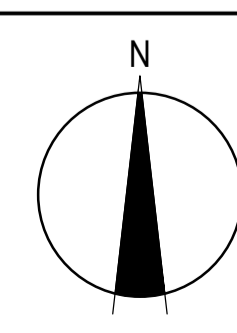
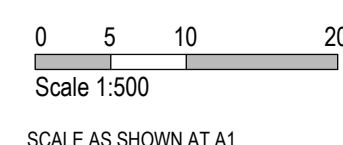
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PLAN OF SUB. NO.
PS900888F
PERMIT REF. NO.
719067

AS CONSTRUCTED



Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Safety In Design

MELWAYS REF: 8M2 PROJECT / DRAWING No: 1700E-024-500 SHEET No: 27 of 27 REVISION: 1