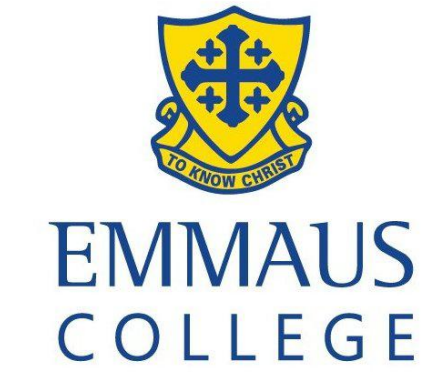


EMMAUS COLLEGE, VERMONT CAMPUS

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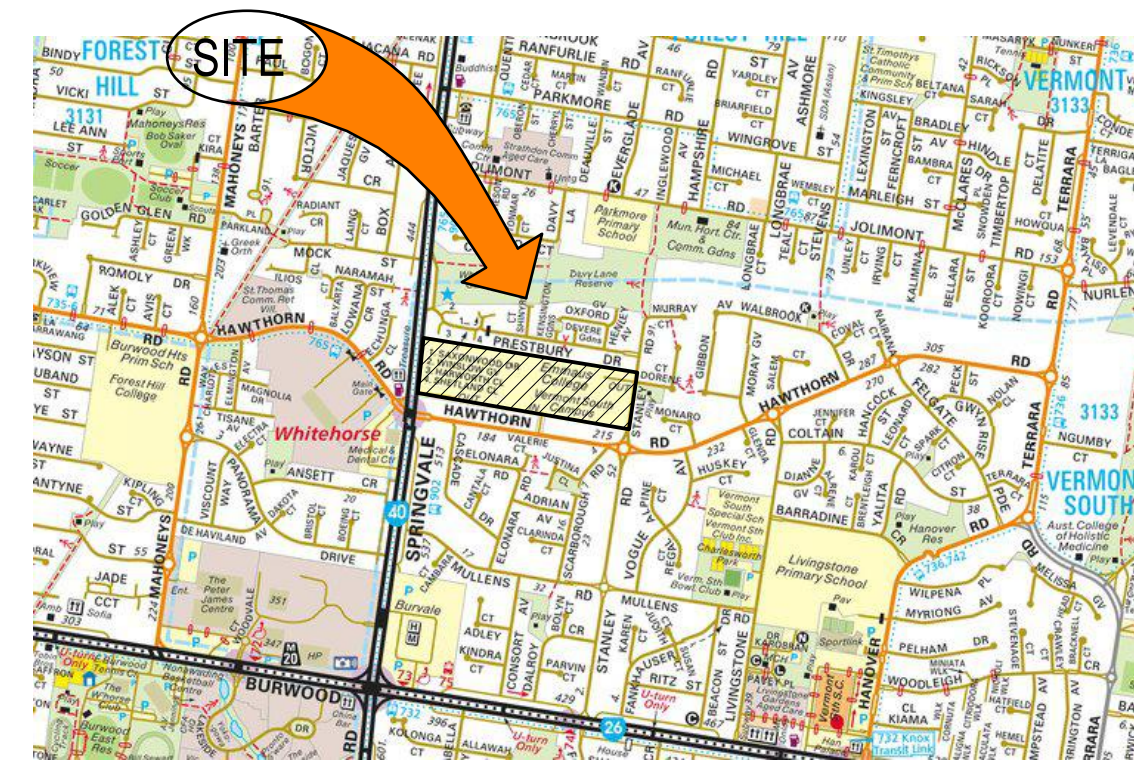
CITY OF WHITEHORSE

CIVIL DRAWINGS

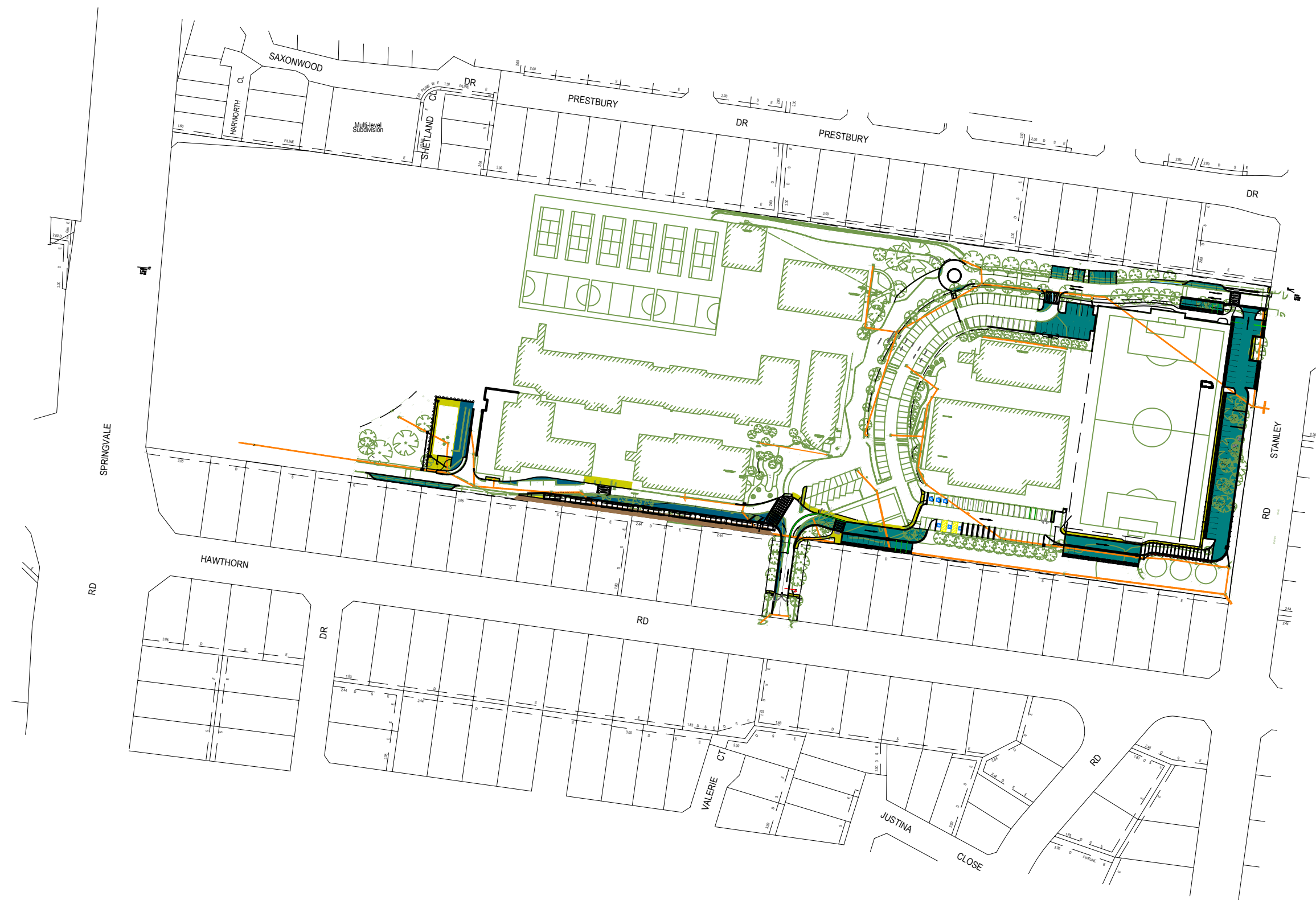
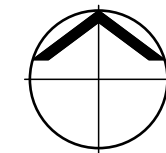


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LOCALITY PLAN
NOT TO SCALE



KEY PLAN
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DRAWING SCHEDULE

SHEET No.	DESCRIPTION
C01	FACE SHEET
C02	GENERAL NOTES, AND CIVIL LEGEND
C03	CIVIL LAYOUT PLAN - SHEET 1 of 5
C04	CIVIL LAYOUT PLAN - SHEET 2 of 5
C05	CIVIL LAYOUT PLAN - SHEET 3 of 5
C06	CIVIL LAYOUT PLAN - SHEET 4 of 5
C07	CIVIL LAYOUT PLAN - SHEET 5 of 5
C08	CIVIL DETAILS
C09	TYPICAL SECTIONS
C10	DRAINAGE LONGITUDINAL SECTIONS AND PIT SCHEDULE



REVISIONS

REVISION	DETAILS	DATE	APPROVED
P5	PRELIMINARY ISSUE	RMcE	10.07.24
P4	PRELIMINARY ISSUE	RMcE	28.03.24
P3	PRELIMINARY ISSUE	RMcE	22.03.24
P2	PRELIMINARY ISSUE	RMcE	31.10.23
P1	PRELIMINARY ISSUE	RMcE	31.10.23

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CIVIL PLANS

Designed	Date
R McEWAN / M MASINA	NOV 2023
Drawn	Scale
M MASINA	NTS @ A1 SHEET



Project Title :

EMMAUS COLLEGE, VERMONT CAMPUS
503 SPRINGVALE ROAD, VERMONT SOUTH,
VICTORIA 3133
CITY OF WHITEHORSE

Drawing Title :

FACE SHEET

Drawing No :

07 23 24 C01

GENERAL NOTES:

- DO NOT SCALE FROM THIS DRAWING. USE WRITTEN DIMENSIONS ONLY.
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH:
 - ARCHITECTURAL AND OTHER SERVICES PLANS AND SPECIFICATIONS.
 - SITE DERIVED INFORMATION.
 - STRUCTURAL PLANS AND SPECIFICATIONS.
 - ANY ADDITIONAL INSTRUCTIONS/INFORMATION SUPPLIED DURING THE COURSE OF CONSTRUCTION.
 - RELEVANT GEOTECHNICAL REPORT.
- ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (A.H.D.)
- THE CONTRACTOR IS TO ENSURE THAT ALL FOOTPATHS, KERBS, ROAD PAVEMENT, NATURE STRIPS, STREET FURNITURE AND SERVICES DAMAGED DURING CONSTRUCTION ACTIVITIES ARE MADE GOOD TO THE SATISFACTION OF THE COUNCIL REPRESENTATIVE AND OTHER RELEVANT AUTHORITIES.
- THE CONTRACTOR IS TO COMPLY WITH THE EPA AND COUNCIL REQUIREMENTS FOR NOISE AND AIRBORNE POLLUTION.
- PRIOR TO THE COMMENCEMENT OF WORKS THE CONTRACTOR IS TO ENSURE THAT ALL REQUIRED PERMITS ARE ISSUED BY THE RELEVANT AUTHORITIES.
- ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS, AND IN COMPLIANCE WITH THE BUILDING CODE OF AUSTRALIA, COUNCIL STANDARDS AND LOCAL LAWS.
- THE CONTRACTOR IS TO ENSURE THAT A LICENSED SURVEYOR IS ENGAGED TO POSITION WORKS AND PROVIDE AS CONSTRUCTED PLANS.
- NO CONTAMINATED FILL IS TO BE IMPORTED ONTO THIS SITE.
- THE CONTRACTOR IS TO ENSURE THAT POLLUTION CONTROL MEASURES ARE IN PLACE DURING CONSTRUCTION AND THAT THEY COMPLY WITH EPA BEST PRACTICE GUIDELINES.
- THE CONTRACTOR IS TO NOTIFY THE DIRECTOR OF ENGINEERING AT COUNCIL OF HAULAGE ROUTES AND SEEK APPROVALS AS REQUIRED.
- THE CONTRACTOR IS TO ENSURE THAT ALL MAINTENANCE DEPOSITS AND BONDS ARE PAID TO THE RELEVANT AUTHORITIES AS REQUIRED.
- ALL CONSTRUCTION WORK IS TO BE LIMITED TO COUNCIL APPROVED WORKING HOURS.
- ANY PART/ROAD CLOSURES ARE TO BE APPROVED BY COUNCIL PRIOR TO WORKS COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUPPLY COUNCIL WITH ANY DOCUMENTATION, SUCH AS TRAFFIC MANAGEMENT PLANS, AS REQUIRED TO OBTAIN PERMITS.
- COORDINATES FOR SETTING OUT ARE TO MAP GRID OF AUSTRALIA (M.G.A.)
- ALL EXISTING TREES MUST BE PROTECTED UNLESS THEY ARE MARKED ON A COUNCIL APPROVED PLAN "TO BE REMOVED". THE CONTRACTOR IS TO ENSURE THAT ALL WORKS WITHIN DRIP LINES OF TREES TO BE RETAINED ARE CARRIED OUT IN ACCORDANCE WITH AN APPROVED ARBORIST PROCEDURE.
- EXISTING PITS REUSED IN PROPOSED STORMWATER SYSTEM ARE UNDERSTOOD TO BE IN ACCORDANCE WITH EXISTING ACCESS MAINTENANCE REQUIREMENTS. SHOULD REQUIREMENTS BE INSUFFICIENT, CONTRACTOR TO CORRECT.

STORM WATER DRAINAGE NOTES:

- ALL DRAINAGE PIPES ARE TO BE R.C. CLASS 'Z', F.R.C. STORMPRO, OR S.G.U.P.V.C. UNLESS NOTED OTHERWISE ON PLAN.
- ALL PITS ARE TO BE CONCRETE AND CONSTRUCTED TO RELEVANT DETAILS AND ALL COVERS ARE TO BE IN ACCORDANCE WITH AS3996-2006. CONCRETE FOR ALL PITS TO BE AT LEAST GRADE NZ5.
- ALL STREET PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF MERRI-BEK STANDARDS.
- ALL LEVELS AND DIMENSIONS ARE TO BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF WORKS AND ANY DISCREPANCIES ARE TO BE REFERRED TO THE ENGINEER FOR A DECISION.
- THE CONTRACTOR IS TO VERIFY THE LOCATION AND LEVEL OF SERVICES PRIOR TO ANY EXCAVATION WORKS IN THE VICINITY OF THESE SERVICES. ALL CLEARANCES BETWEEN SERVICES ARE TO BE MET IN ACCORDANCE WITH AS3500.3:2003 SECTION 7.2.7.
- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL SERVICES PRIOR TO COMMENCEMENT OF WORKS.
- THE CONTRACTOR IS TO CONTACT ALL RELEVANT AUTHORITIES 48 HOURS PRIOR TO ANY EXCAVATION WORKS IN THE VICINITY OF THE IDENTIFIED SERVICES.
- ANY EXCAVATED TRENCHES IN EXCESS OF 1.5m IN DEPTH ARE TO BE ADEQUATELY SHORED TO PREVENT COLLAPSE DURING WORKS.
- ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL APPROVED PLANS AND STANDARD DRAWINGS.
- THE CONTRACTOR IS TO OBTAIN ALL NECESSARY INSPECTIONS AND APPROVALS FROM THE CITY ENGINEER AND ALL OTHER RELEVANT AUTHORITIES.
- UNLESS NOTED OTHERWISE, TRENCH BACKFILL SHOULD BE COMPACTED TO NOT LESS THAN 95% OF THE DRY DENSITY RATIO FOR STANDARD COMPACTION UNDER LANDSCAPED AREAS AND 98% MODIFIED COMPACTION UNDER PAVED AREAS.
- WHEN REMOVING ANY REDUNDANT PIPES AND PITS, THE CONTRACTOR MUST BACKFILL IN ACCORDANCE WITH TRENCH BACKFILL NOTES ABOVE.
- CONTRACTOR IS TO PROVIDE A SAMPLE OF GRATES TO BE PLACED ADJACENT TO PATHS FOR APPROVAL BY THE ARCHITECT PRIOR TO INSTALLATION.
- SCHOOL WORKS SUPERVISOR IS TO BE GIVEN 24 HOUR NOTICE PRIOR TO INSPECTIONS OF THE FOLLOWING ITEMS:
 - BREAK IN AND PIPE TO PIT CONNECTION, PRIOR TO BACKFILL AT LEGAL POINT OF DISCHARGE
 - COMPLETION OF WORKS.
- ALL PLUMBING AND DRAINAGE WORK IS TO BE COMPLETED IN ACCORDANCE WITH AS3500:2003 AND ANY OTHER RELEVANT CODES OF PRACTICE FOR SERVICES AND ASSOCIATED WORKS.
- ALL PIPES ARE TO HAVE MINIMUM 300mm COVER UNLESS NOTED OTHERWISE.
- MANHOLE COVERS AND GRATINGS MUST MATCH FINISHED SURFACE LEVELS AND GRADES.
- ALL MINIMUM PIPE GRADES ARE TO BE IN ACCORDANCE WITH AS3500-3:2003

HEALTH AND SAFETY:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL WORKS ARE CARRIED OUT IN A SAFE MANNER. THE WORKS SHALL COMPLY WITH APPLICABLE HEALTH AND SAFETY LEGISLATION INCLUDING CODES OF PRACTICE, AUSTRALIAN STANDARDS, GUIDANCE NOTES AND WORKSAFE REQUIREMENTS.
- THE CONTRACTOR SHALL ENSURE A RISK ASSESSMENT HAS BEEN CARRIED OUT AND DOCUMENTED FOR ALL ACTIVITIES PERFORMED ON THE SITE. SAFE WORK PROCEDURES MUST BE DOCUMENTED AS REQUIRED BY LEGISLATION AND RELEVANT AUTHORITIES. THE BUILDER MAY NEED TO ENGAGE SUITABLY EXPERIENCED CONSULTANTS TO PREPARE A SAFE WORK PROCEDURE IF THE BUILDER IS INEXPERIENCED IN THIS FIELD OR IF THEY ARE NOT SATISFIED WITH THE METHOD PROPOSED BY THE CONTRACTOR.

TREE PROTECTION ZONES:

- CONTRACTOR TO ESTABLISH TREE PROTECTION ZONES IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
- A PROTECTIVE FENCE IS TO BE ERRECTED AT THE PERIMETER OF THE TREE PROTECTION ZONE.
- WATERING IS TO TAKE PLACE 4 TIMES OVER THE SUMMER AND AUTUMN SEASONS WITH APPROXIMATELY 700 LITRES OF WATER EACH TIME.
- ANY WORKS WITHIN THE TREE PROTECTION ZONE IS TO BE APPROVED BY THE ARBORIST. THE CONTRACTOR IS TO PROVIDE A WORKS METHOD STATEMENT OUTLINING WORKS, ANY RISK OF DAMAGE TO THE ROOT STRUCTURE AND PROTECTION TECHNIQUES.

AG-DRAINS NOTES:

- AG-DRAINS (SUBSOIL DRAINS) ARE TO BE INSTALLED IN ACCORDANCE WITH AS3500.3:2003.
- MIN GRADE OF AG-DRAINS IS TO BE 1:150.
- AG-DRAINS ARE TO BE FITTED WITH 150 DIA INSPECTION OPENINGS (I.O.) AT THEIR TOPMOST ENDS, AT CHANGES OF FLOW DIRECTIONS AND AT A MAXIMUM HORIZONTAL DISTANCE OF 45m.
- INSPECTION OPENINGS (I.O.) ARE TO EXTEND VERTICALLY TO THE TOP OF A PAVED AREA AND FINISHED WITH A GALVANISED GATIC COVER OR WITHIN 100mm FROM THE SURFACE IN UNPAVED AREAS AND TERMINATED WITH A SCREW CAP LEGIBLY MARKED 'SW'. ADEQUATE CAST IRON PROTECTION COVERS ARE TO BE USED WHEN POSITIONED WITHIN TRAFFIC LANES OR PAVEMENTS WITH VEHICLE ACCESS.
- THE CONTRACTOR IS TO ALLOW FOR ALL AG-DRAINS AS REQUIRED AT THE REAR OF RETAINING WALLS AND EDGE OF FLEXIBLE PAVEMENTS.
- ALL AG-DRAINS ARE TO BE WRAPPED IN GEOTEXTILE MATERIAL OR THE ENTIRE BEDDING MATERIAL IS TO BE WRAPPED WITH GEOTEXTILE FABRIC OVERLAPPING NOT LESS THAN 300mm.
- UNLESS NOTED OTHERWISE THE EMBEDMENT MATERIAL IS TO BE 20mm NOM DIA CLEAN SCREENINGS FOR THE FULL DEPTH OF THE EMBEDMENT TRENCH EXCEPT FOR TOPSOIL REQUIREMENTS AS PER LANDSCAPING SPECIFICATIONS.

SUBGRADE PREPARATION AND EARTHWORKS:

REFER TO SOIL REPORT.

- UNDER ALL PAVEMENT AREAS, STRIP ALL TOPSOIL AND PREPARE FOR PAVEMENT AS PER DETAIL.
- CUT AND FILL AS REQUIRED TO PRODUCE FINISHED SURFACE LEVEL AS SPECIFIED LESS PAVEMENT THICKNESS AS SHOWN ON DRAWINGS.
- COMPACT CUT SURFACE TO 98% STANDARD MAXIMUM DRY DENSITY (SMDD).
- THE MOISTURE CONTENT OF THE SUBGRADE OR FILL SHOULD BE WITHIN 95%-105% OF THE STANDARD OPTIMUM MOISTURE CONTENT AT THE TIME OF COMPACTION.
- PRIOR TO PLACEMENT OF FILL OR PAVEMENT REMOVE AND REPLACE SOFT OR UNSTABLE SUBGRADE WITH CLEAN WELL GRADED APPROVED MATERIAL COMPACTED TO 98% SMDD. PROOF ROLL SUBGRADE SURFACE WITH A DUAL WHEELED PNEUMATIC TYRED VEHICLE (MIN. 9.4 TONNE LOADED AXLE) AND MAKE GOOD TO ANY SOFT SPOTS.
- EXCAVATED AND PREPARED SURFACES UNDER ALL PAVEMENTS SHALL BE SPRAYED WITH AN APPROVED WEED KILLER. CARE MUST BE TAKEN TO AVOID CONTAMINATING GARDEN BEDS AND LAWN AREAS.
- FILLING SHALL BE CLEAN WELL GRADED GRANULAR MATERIAL COMPACTED TO 95% MDD IN MAX.200mm LOOSE THICKNESS LAYERS, OR APPROVED IMPORTED CLAY FILL COMPACTED TO 98% SMDD IN 150mm LAYERS.
- CUT OR BACKFILL AREA BEHIND KERBING TO TOP OF KERB AND GRADE TO 1 IN 4 MAX SLOPE TO MATCH EXISTING SURFACE LEVELS.
- CONTRACTOR IS TO SUPPLY A RATE TO DEAL WITH SOFT SPOTS. THE RATE IS TO INCLUDE EXCAVATION AND REMOVAL OF SPOIL OFF SITE. RATE IS TO BE CALCULATED PER CUBIC METRE OF BACKFILL.

CONCRETE PAVEMENTS

- UNLESS SPECIFIED OTHERWISE ALL EXTERNAL PAVEMENT FINISHES TO BE NON-SLIP STIPPLE FINISH.
- ALL PAVEMENTS TO BE CURED IN ACCORDANCE WITH CURRENT INDUSTRY PRACTICE AND AS SPECIFIED IN AS 3600.
- ALL JOINTS TO BE SEALED WITH FLEXIBLE WATERPROOF SEALANT.
- ALL SLAB EDGES TO BE THICKENED IN ACCORDANCE WITH THE ENGINEERED DETAIL.
- WHEN CONCRETE PAVEMENTS FINISH AGAINST ANY STRUCTURES PROVIDE 10mm ABELFLEX SEPARATOR AND MINIMUM 15mm THICK FLEXIBLE SEALANT OVER.

PATHWAYS AND COURTYARDS:

- PAVEMENT COMPOSITION INCLUDING THICKNESS AND REINFORCEMENT IS TO BE IN ACCORDANCE WITH THE ENGINEERED DETAIL.
- PATHWAYS ARE TO BE PROVIDED WITH UNIFORM CROSS FALL TO GRATE PITS WHERE PROVIDED OTHERWISE PROVIDE UNIFORM CROSS FALL AWAY FROM BUILDING AT 1:40 MAXIMUM GRADE.
- REFER TO APPROVED ARCHITECTURAL DRAWINGS FOR ALL PATHWAY WIDTHS, EDGE DETAILING AND FINISHES.
- LONGITUDINAL FALL TO BE MAXIMUM OF 1 IN 20.
- STEP RAMPS, WHERE REQUIRED, ARE TO BE THE WIDTH OF MERGING PATHS WITH A GRADIENT NOT STEEPER THAN 1 IN 8.
- ALL PATHWAYS ARE TO BE CONSTRUCTED OVER PROOF ROLLED SUBGRADE. ALL SOFTSPOTS ARE TO BE REMOVED AND BACKFILLED WITH WELL COMPACTED CRUSHED ROCK.

CONCRETE STRENGTH

- CONCRETE PAVEMENTS, PATHS, AND KERBS - N32 MPA
- CONCRETE RETAINING WALLS - N40 MPA
- CONCRETE DRAINAGE STRUCTURES - N25 MPA
- MINIMUM COVER TO STEEL REINFORCEMENT - 40mm FOR PAVEMENTS AND 50mm FOR BURIED STRUCTURES.
- CONCRETE COLOUR AND FINISH TO ARCHITECTS DRAWINGS AND SPECIFICATIONS.

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CIVIL LEGEND

	EXISTING SEWER
	EXISTING WATER
	EXISTING GAS
	EXISTING TELSTRA / FIBRE OPTIC
	EXISTING ELECTRICITY
	EXISTING STORMWATER DRAIN & PITS
	PROPOSED STORMWATER DRAIN
	INTERNAL DRAINAGE SYSTEM BY OTHERS. REFER HYDRAULIC ENGINEERS DRAWINGS FOR DETAILS. (TYP)
E110.00	EXISTING SURFACE LEVEL
P113.22	PROPOSED PAVEMENT LEVEL
CL114.35	TOP OF PIT LEVEL
IL113.50	NEW INVERT LEVEL
FFL111.50	NEW FINISHED FLOOR LEVEL
	PROPOSED STORMWATER PIT
	EXISTING KERB & CHANNEL
	EXISTING KERB
	PROPOSED BARRIER KERB AND CHANNEL
	PROPOSED MODIFIED KERB AND CHANNEL
	PROPOSED CONCRETE KERB
	PROPOSED SPIKED KERB
	PROPOSED SLEEPER RETAINING WALL
	PROPOSED BLOCK RETAINING WALL
	PROPOSED SAWCUT
	AG DRAIN
	EXISTING TREE TO REMAIN
	EXISTING TREE TO BE REMOVED
	BOLLARDS
	BOLLARDS LOCKABLE
	CHAINMESH FENCE (BY OTHERS)
	TREE DIAMOND
	EXISTING TBM
	TBM RIVET IN KERB RL.114.25 AHD

PAVEMENT SCHEDULE

	LIGHT DUTY ASPHALT PAVEMENT
	HEAVY DUTY ASPHALT PAVEMENT
	ASPHALT FOOTPATH PAVEMENT
	ASPHALT PAVEMENT RESURFACING
	CONCRETE FOOTPATH PAVEMENT
	LANDSCAPE AREA



REVISIONS

REVISION	DETAILS	DATE	APPROVED
P5a	PRELIMINARY ISSUE	15.07.24	RMcE
P5	PRELIMINARY ISSUE	10.07.24	RMcE
P4	PRELIMINARY ISSUE	28.03.24	RMcE
P3	PRELIMINARY ISSUE	22.03.24	RMcE
P2	PRELIMINARY ISSUE	31.10.23	RMcE
P1	PRELIMINARY ISSUE	31.10.23	RMcE

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CIVIL PLANS

Designed	Date
R McEWAN / M MASINA	NOV 2023
Drawn	Scale
M MASINA	NTS @ A1 SHEET

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Project Title :

EMMAUS COLLEGE, VERMONT CAMPUS
603 SPRINGVALE ROAD, VERMONT SOUTH,
VICTORIA 3133
CITY OF WHITEHORSE

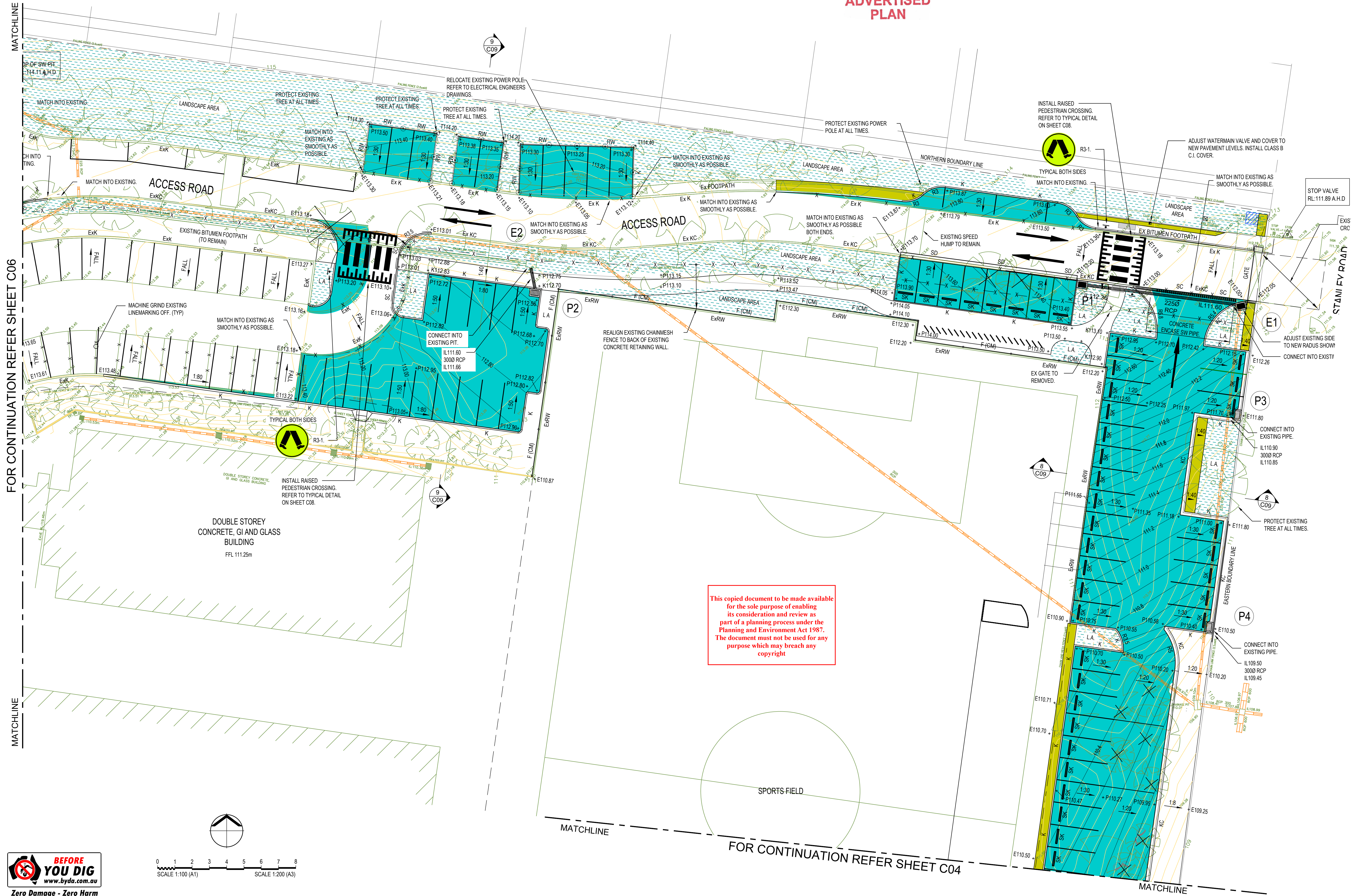
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GENERAL NOTES, AND CIVIL LEGEND

Drawing No :

07 23 24 C02

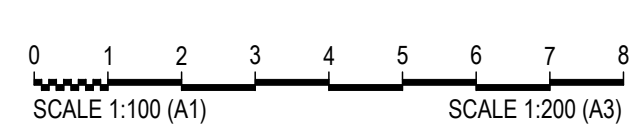
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MATCHLINE
FOR CONTINUATION REFER SHEET C06
MATCHLINE

MATCHLINE
FOR CONTINUATION REFER SHEET C04
MATCHLINE



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P5	10.07.24	
P4	28.03.24	
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Drawing Title:
CIVIL LAYOUT PLAN - SHEET 1 of 5

Drawing No.:
07 23 24 C03

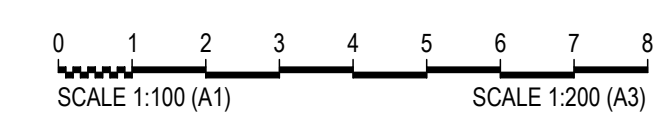
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P2	PRELIMINARY ISSUE	RMcE 31.10.23	
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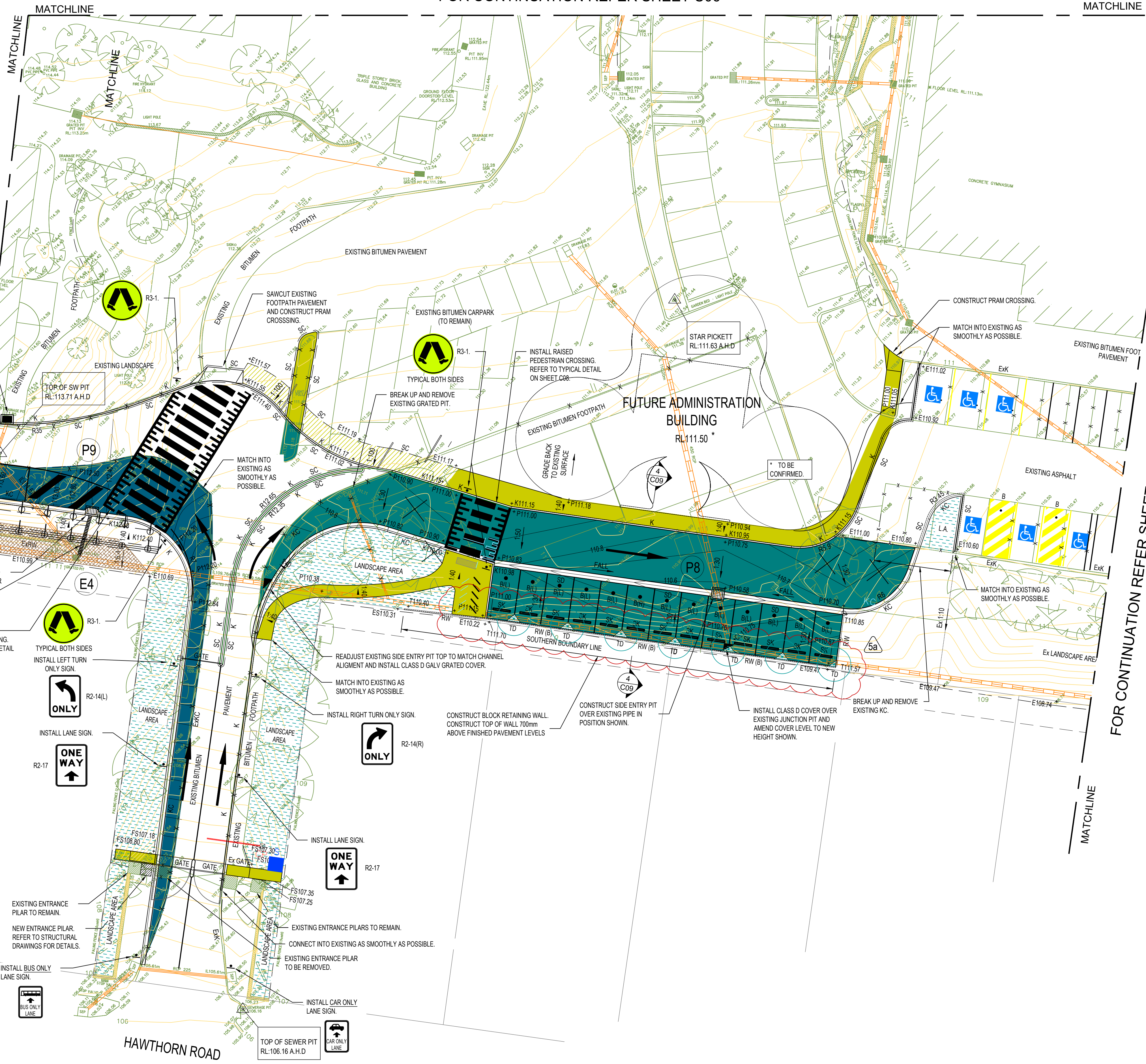
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CIVIL LAYOUT PLAN - SHEET 2 of 5

Drawing No.:
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P5a	15.07.24	
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Drawn	Scale
M Masina	1:100 @ A1 SHEET

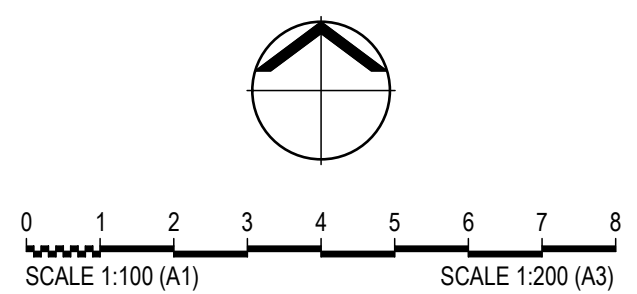
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Drawing Title:
CIVIL LAYOUT PLAN - SHEET 3 of 5

Drawing No.:
07 23 24 C05
P5a



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P5	10.07.24	RMcE
P4	28.03.24	RMcE
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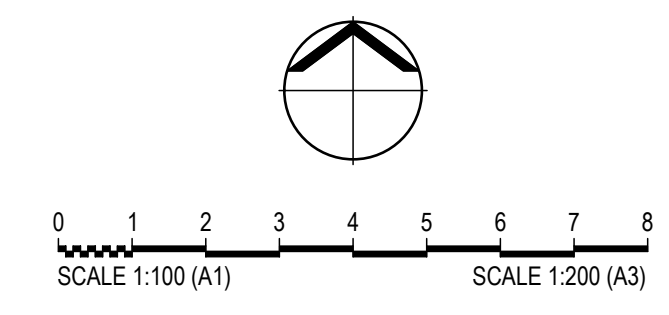
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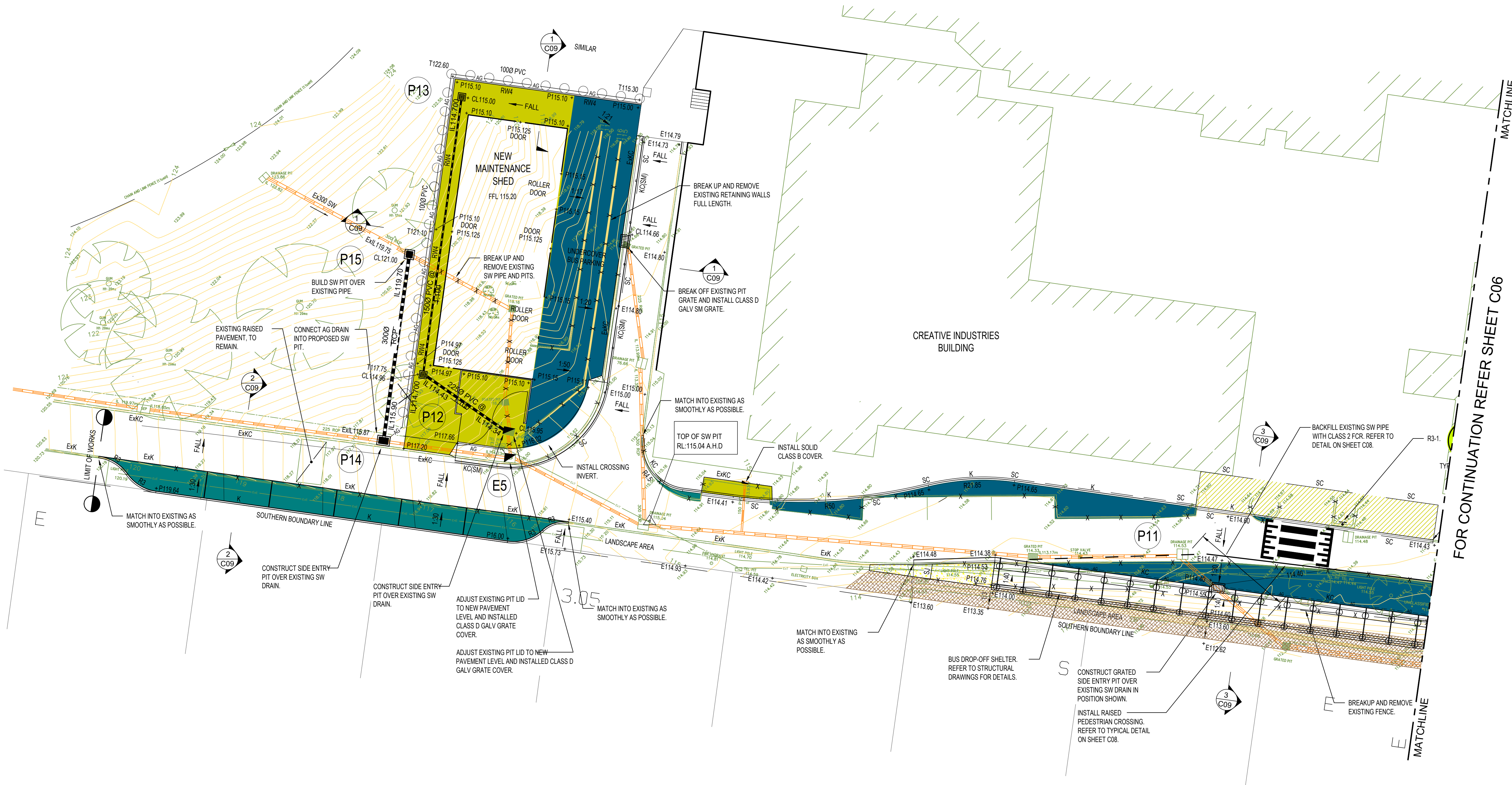
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Drawing Title:
CIVIL LAYOUT PLAN - SHEET 4 of 5

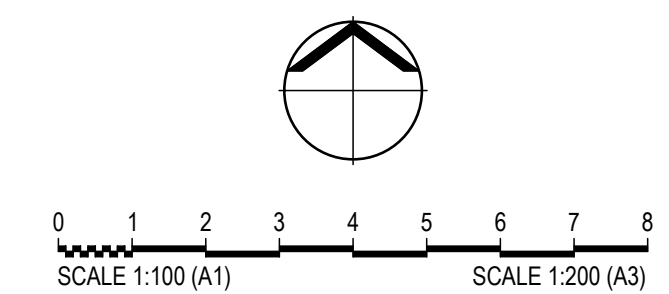
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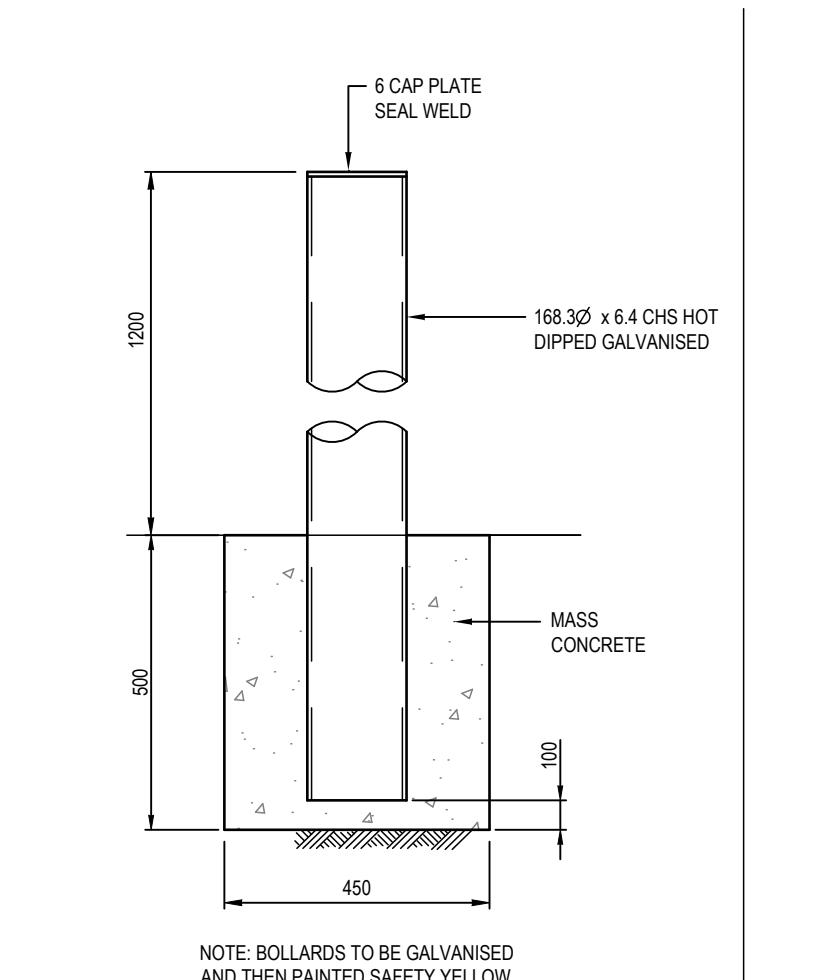
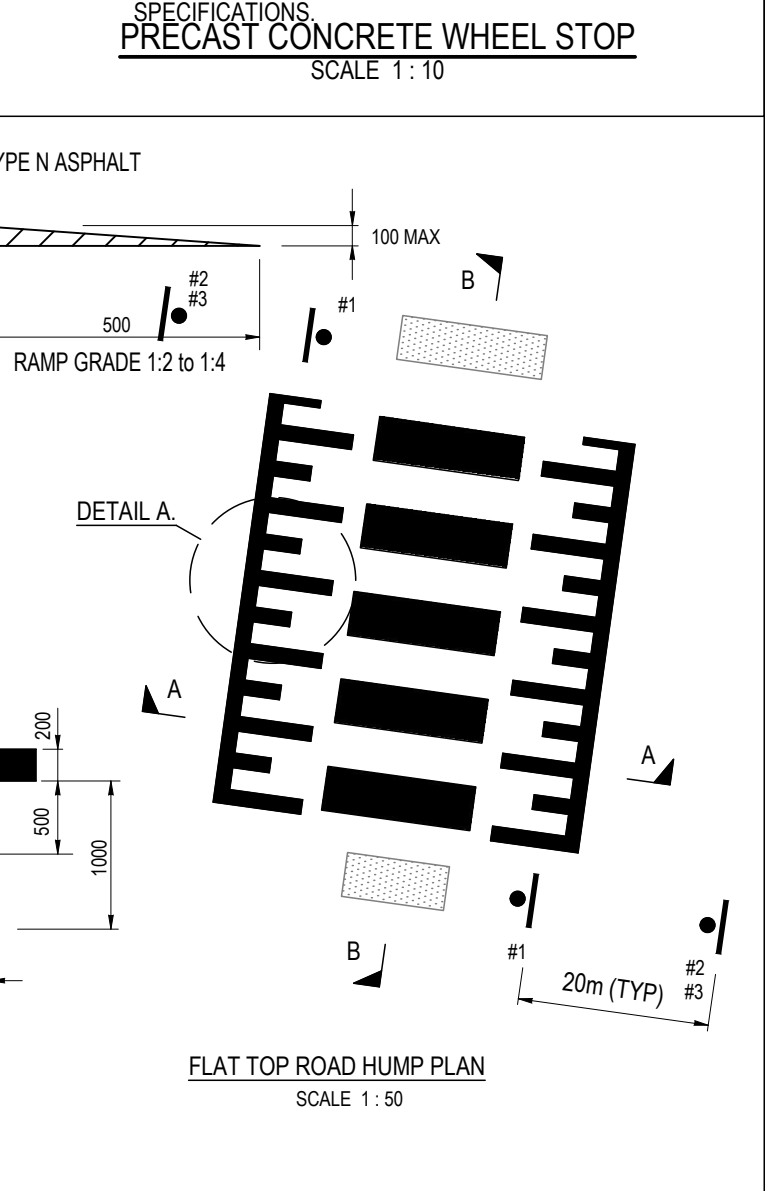
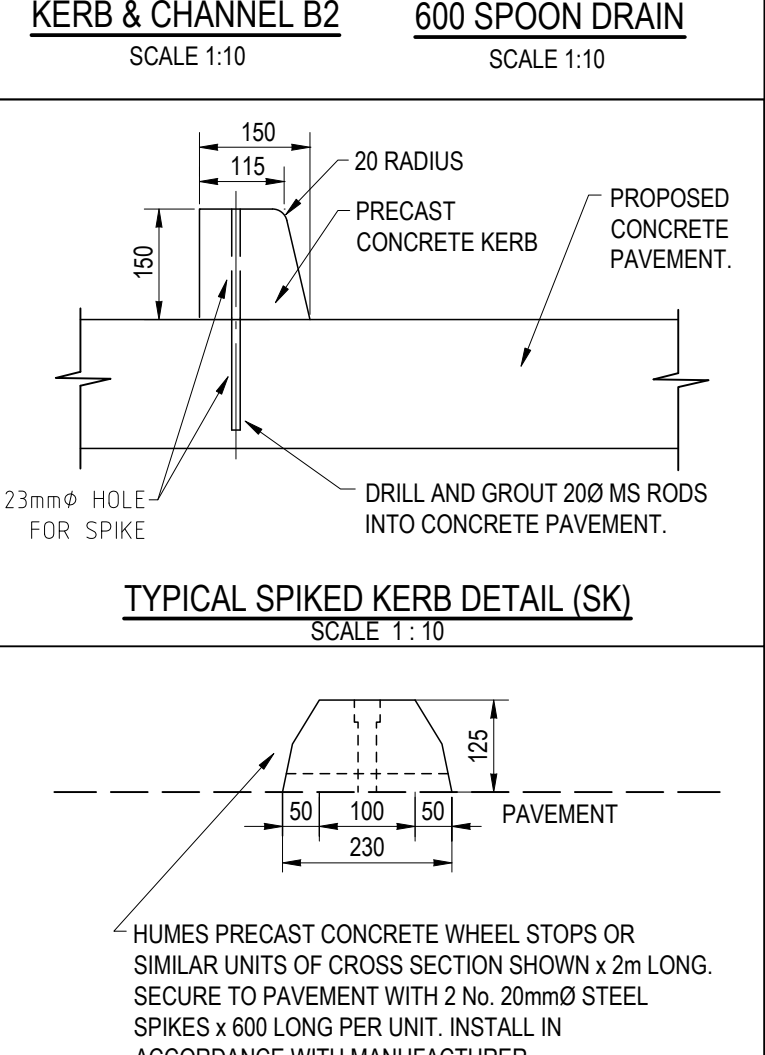
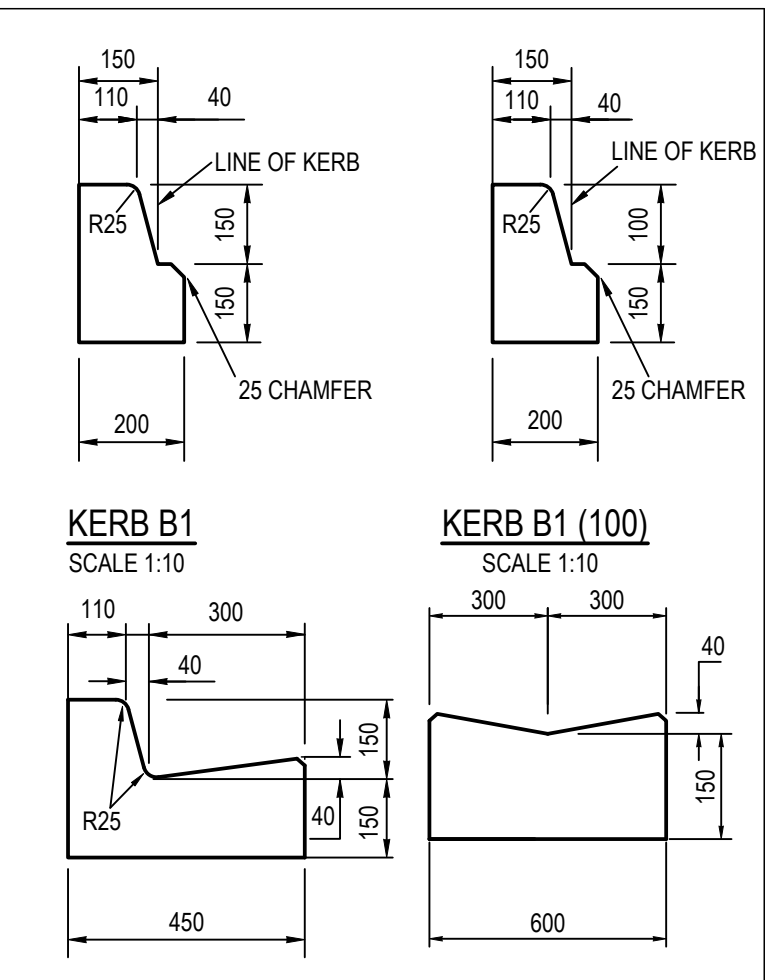
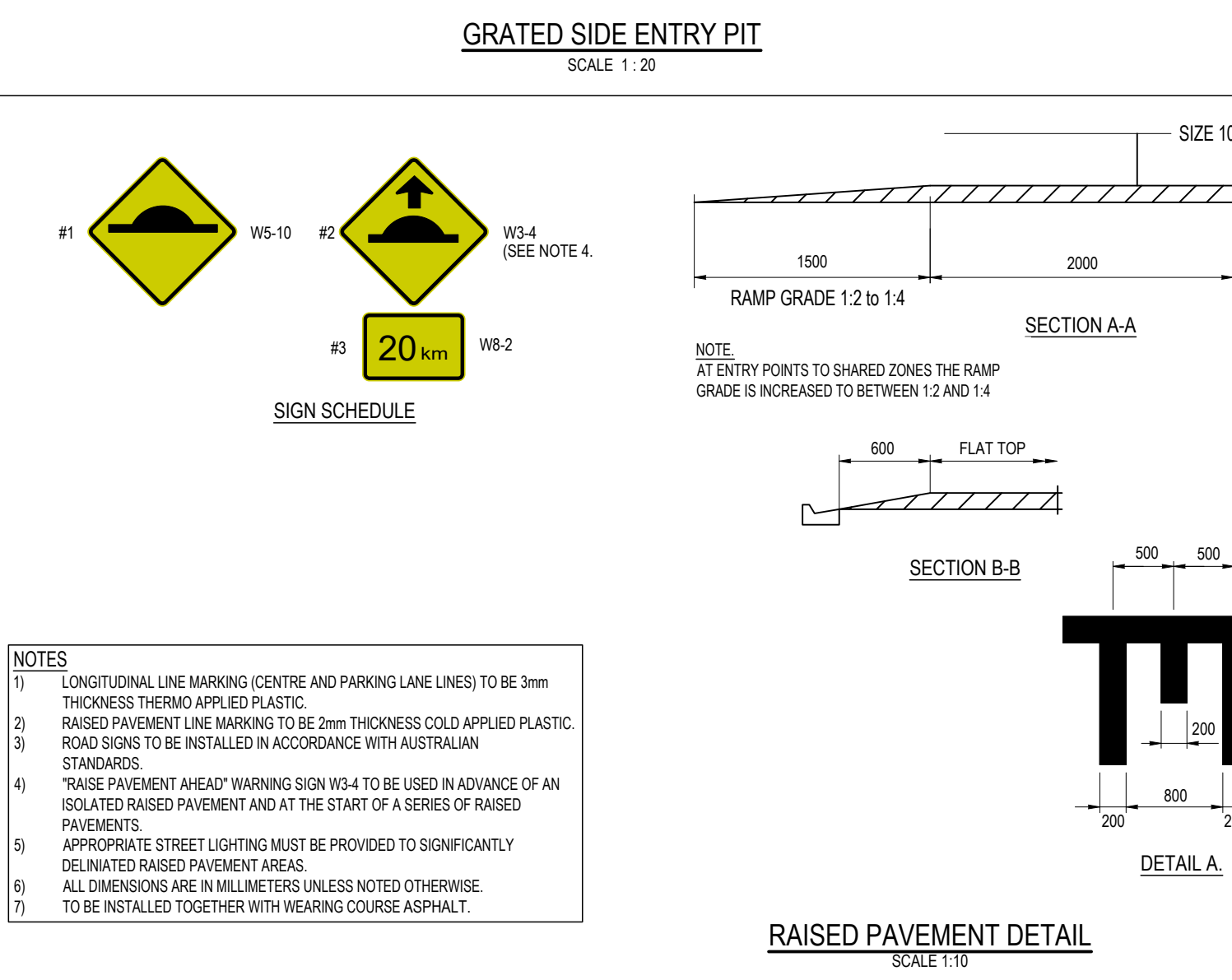
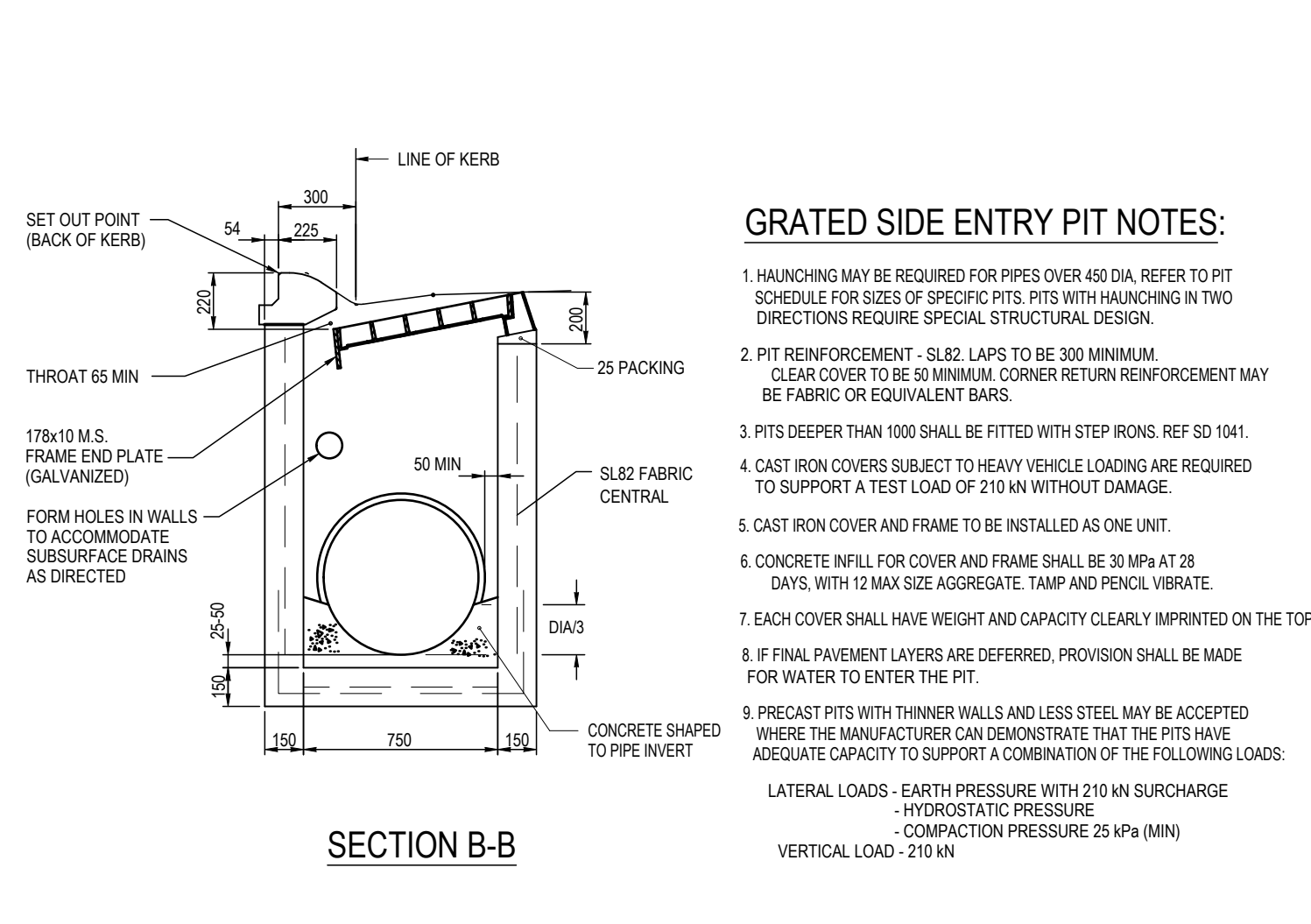
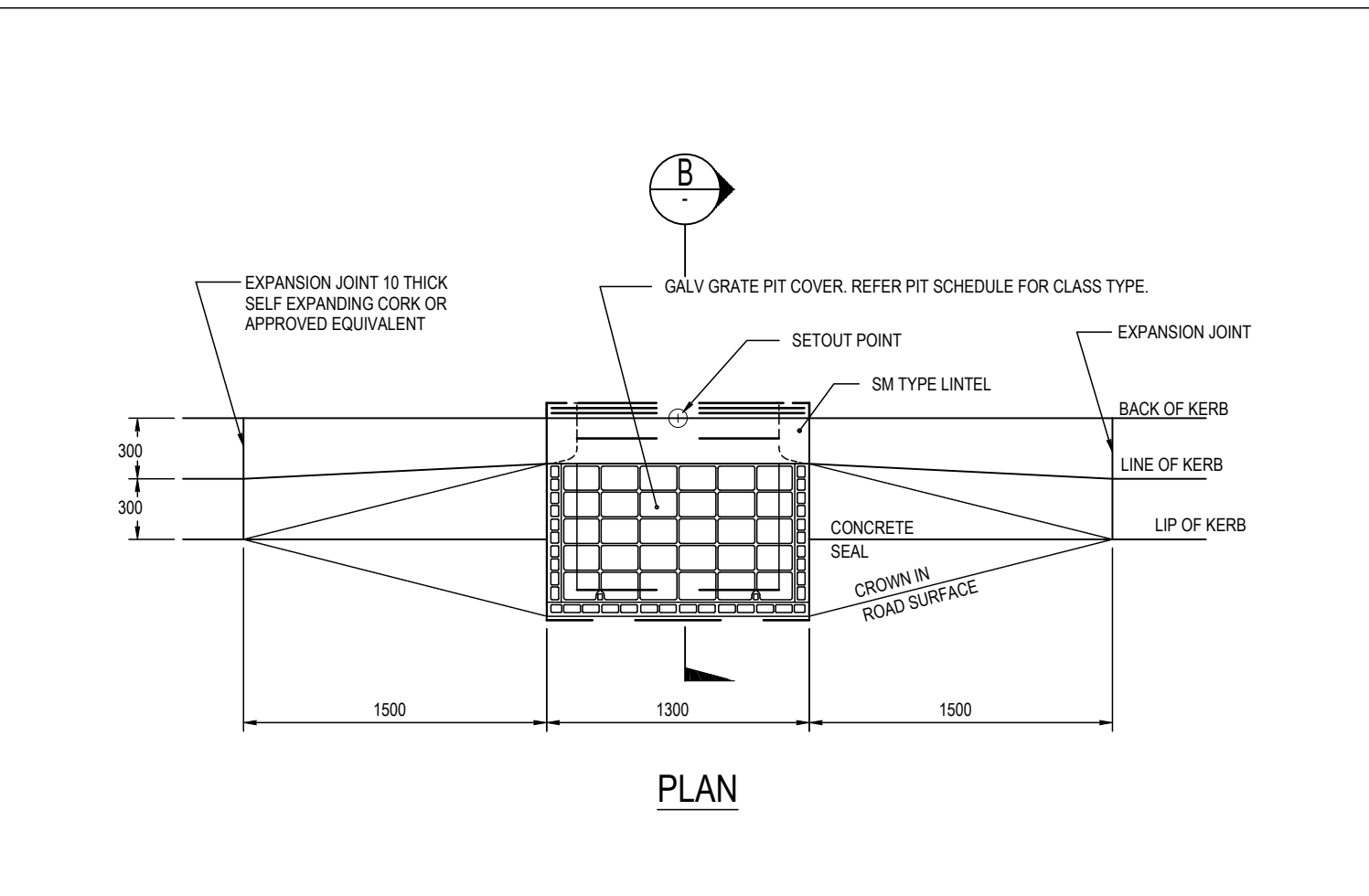
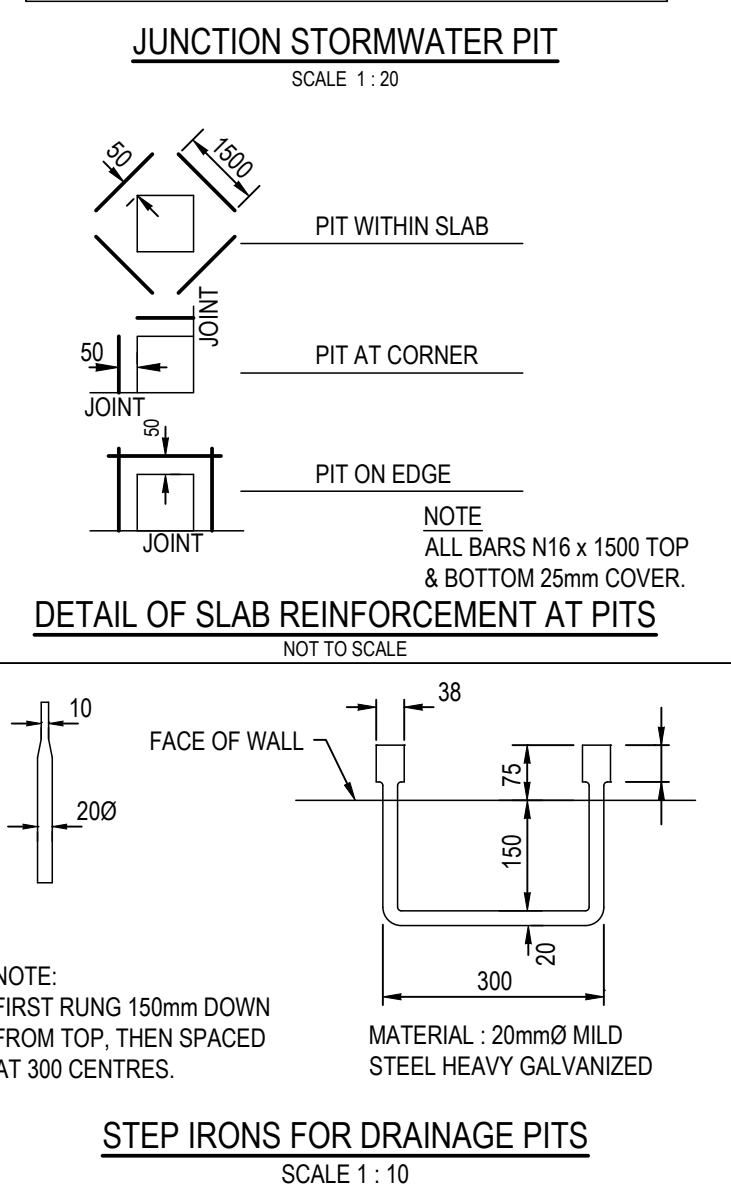
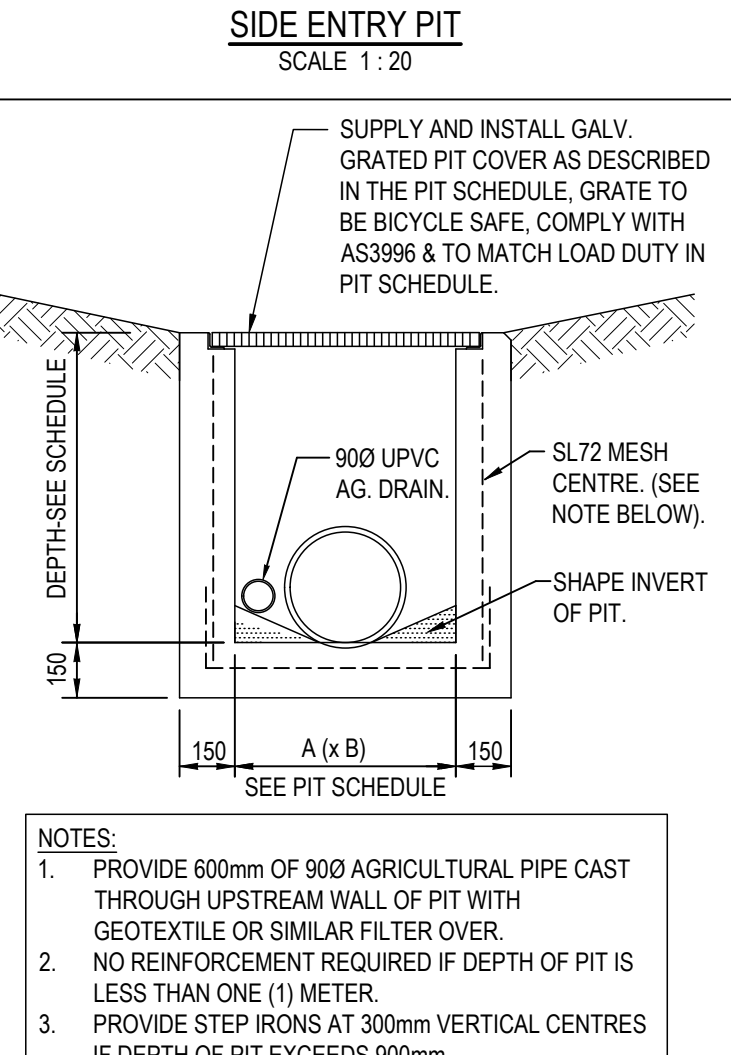
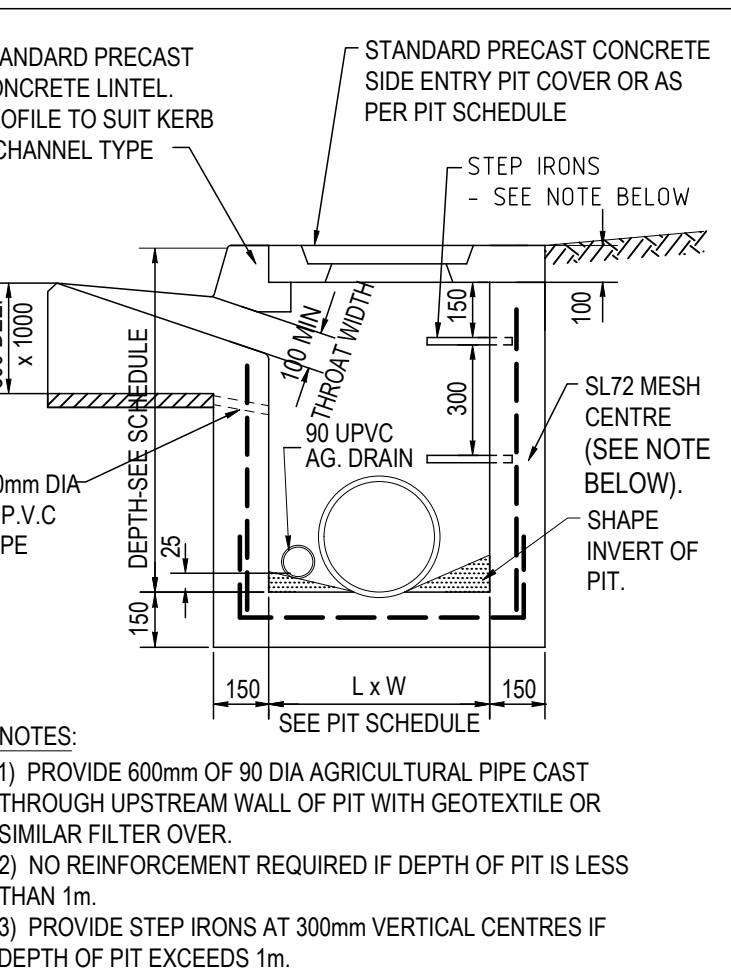
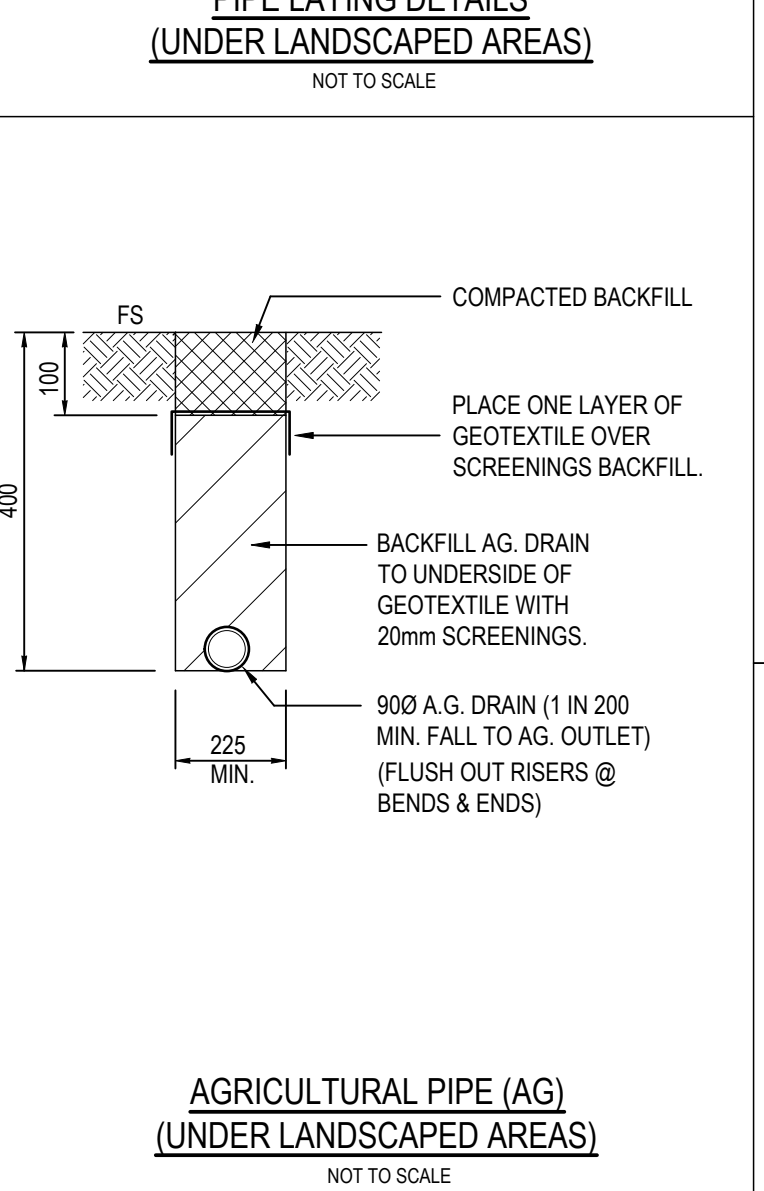
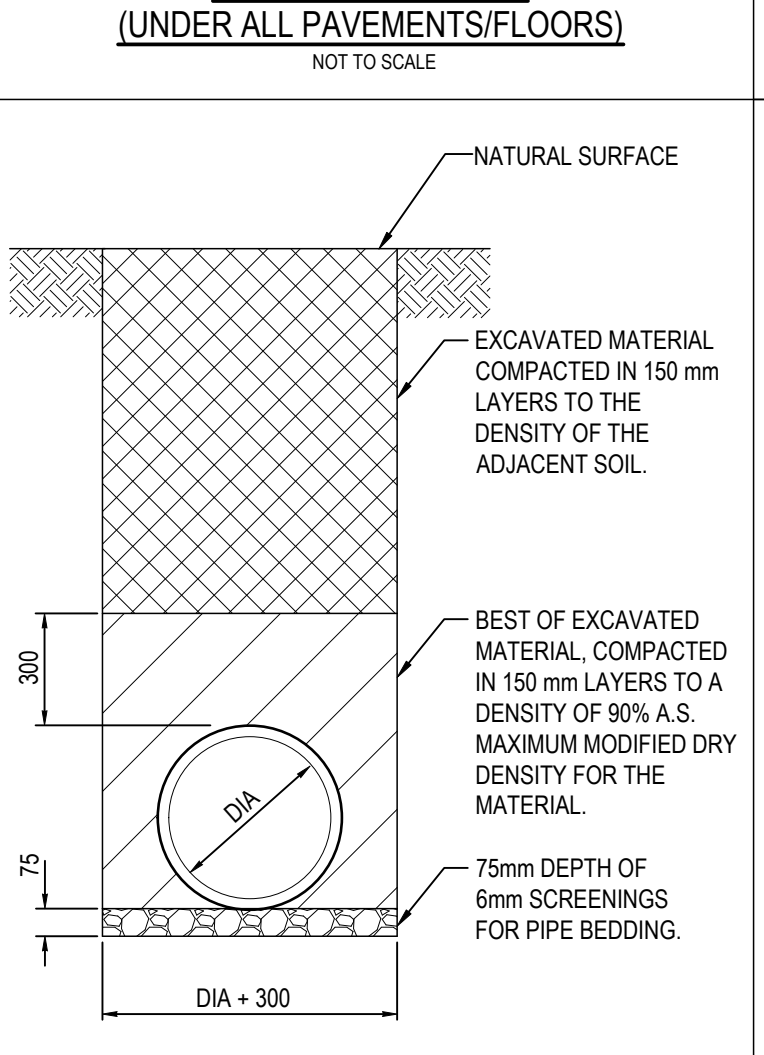
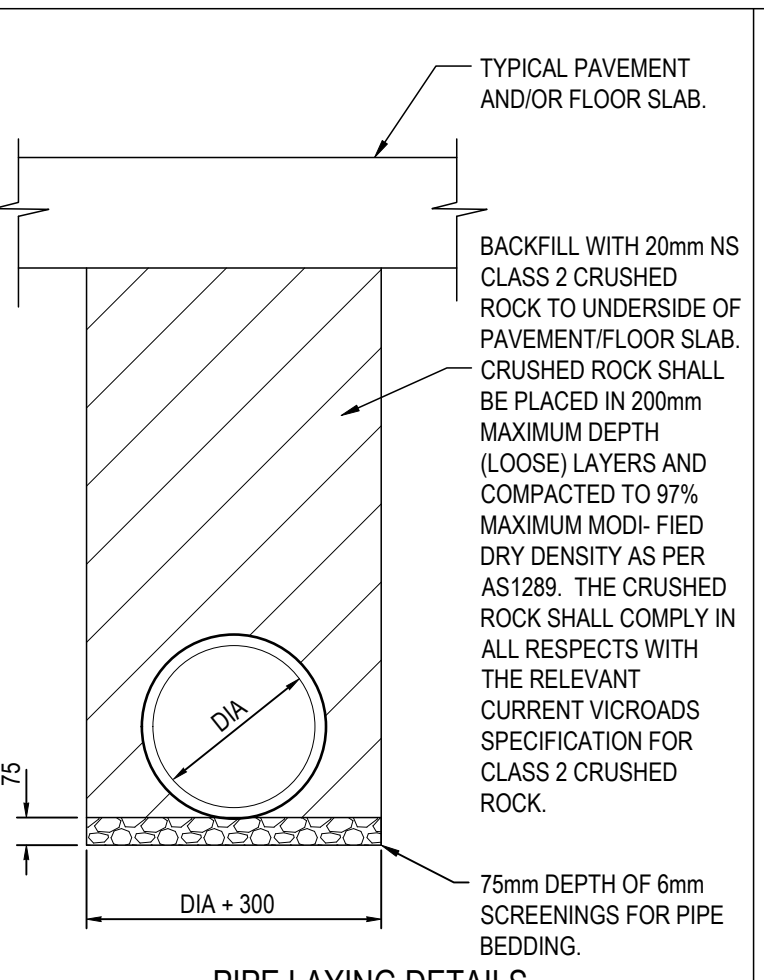
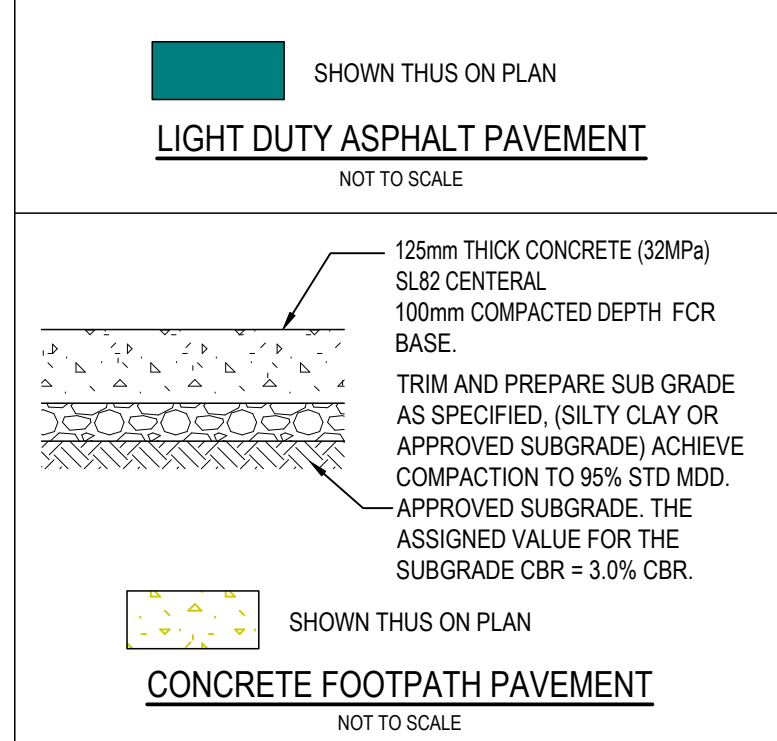
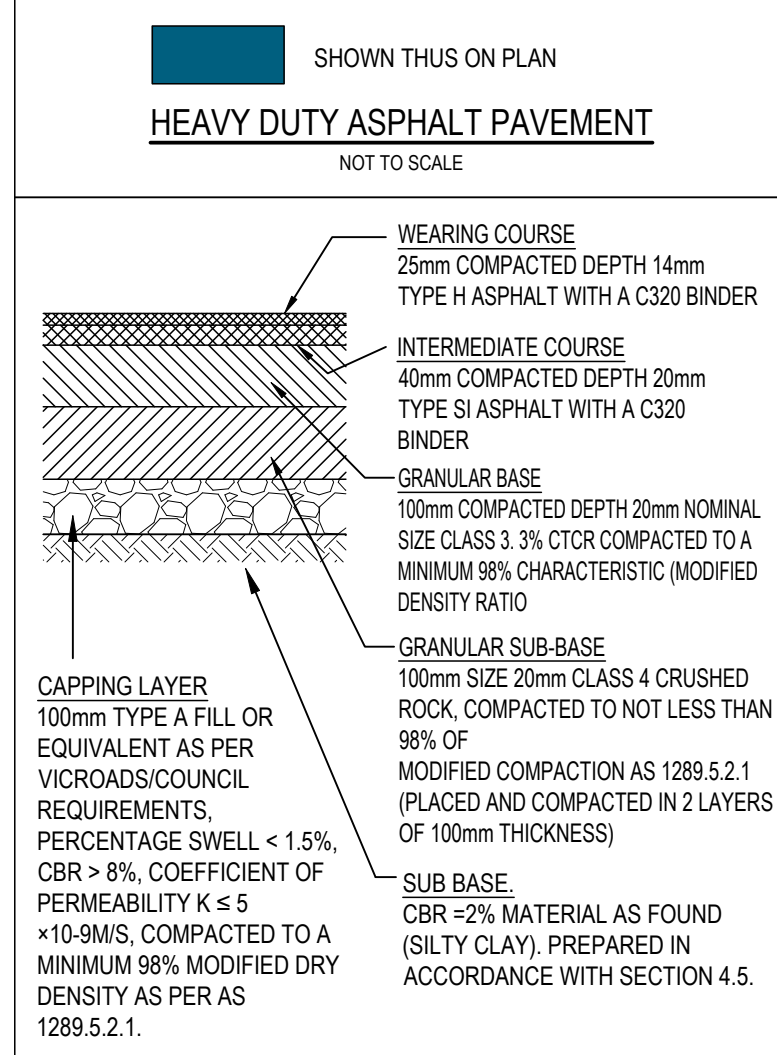
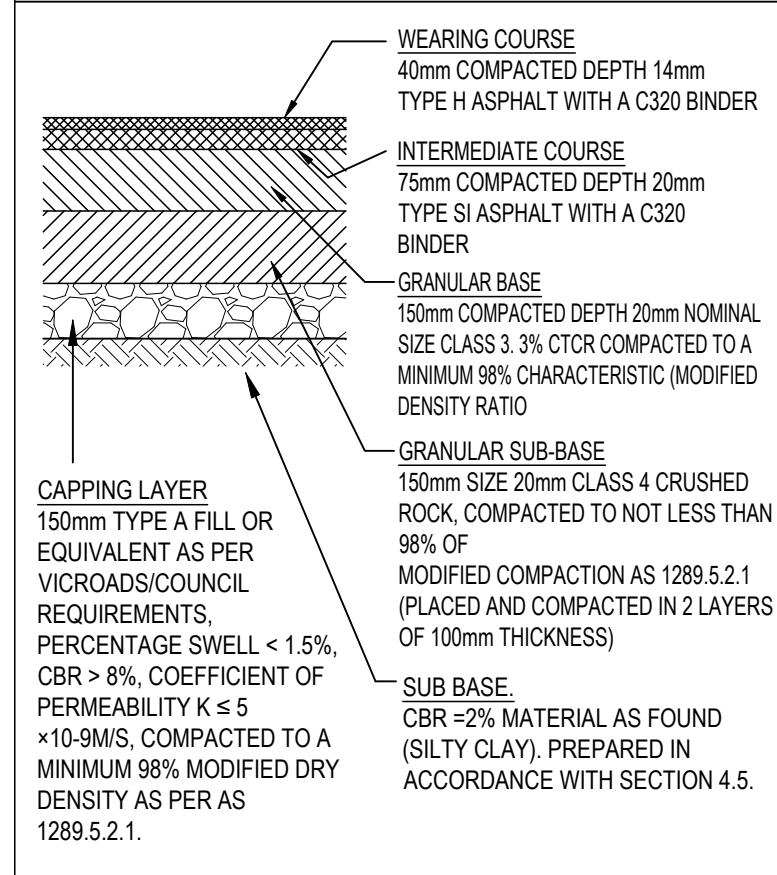
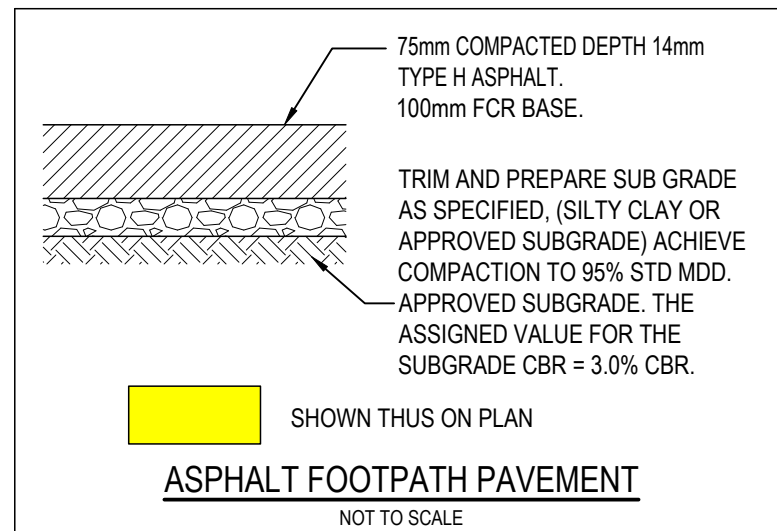
Project Title:
EMMAUS COLLEGE, VERMONT CAMPUS
503 SPRINGVALE ROAD, VERMONT SOUTH,
VICTORIA 3133
CITY OF WHITEHORSE

Drawing Title:
CIVIL LAYOUT PLAN - SHEET 3 of 5

Drawing No.:
07 23 24 C07
P5

ADVERTISED PLAN

SCALE 1:20



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REVISION	DETAILS	DATE	APPROVED
P5	PRELIMINARY ISSUE	RMcE	10.07.24
P4	PRELIMINARY ISSUE	RMcE	28.03.24
P3	PRELIMINARY ISSUE	RMcE	22.03.24
P2	PRELIMINARY ISSUE	RMcE	31.10.23
P1	PRELIMINARY ISSUE	RMcE	31.10.23

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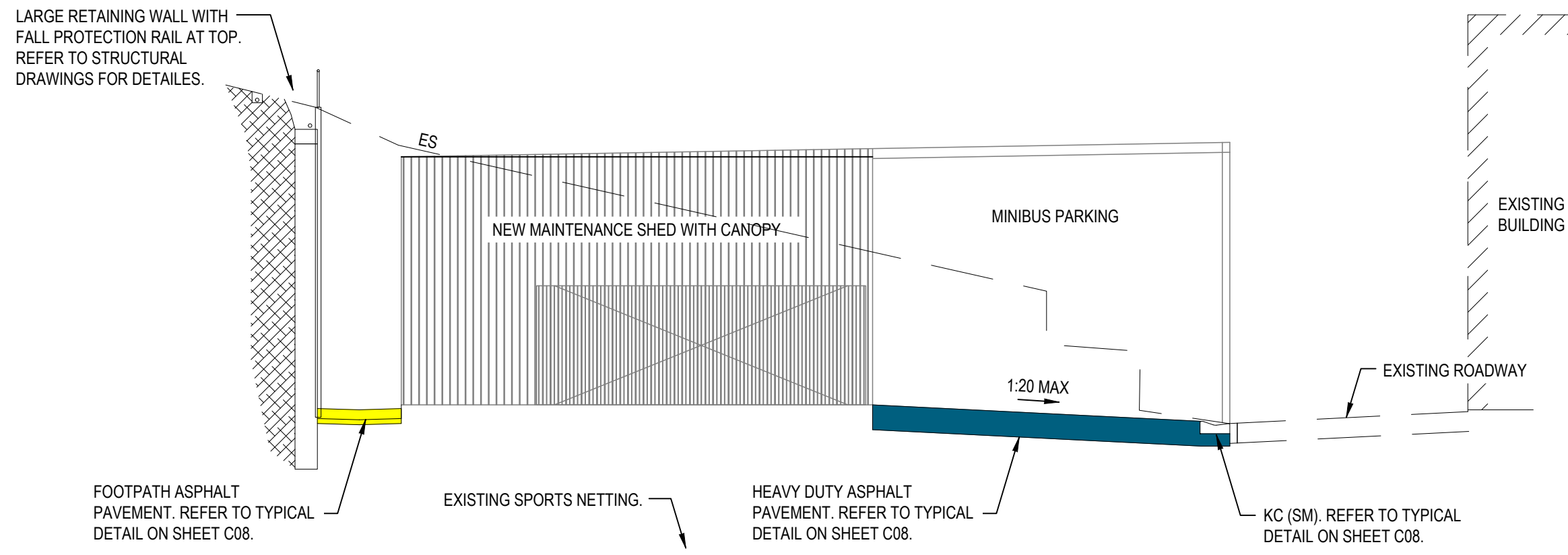
CIVIL PLANS	
Designed	Date
R McEWAN / M MASINA	NOV 2023
Drawn	Scale
M MASINA	1:100 @ A1 SHEET



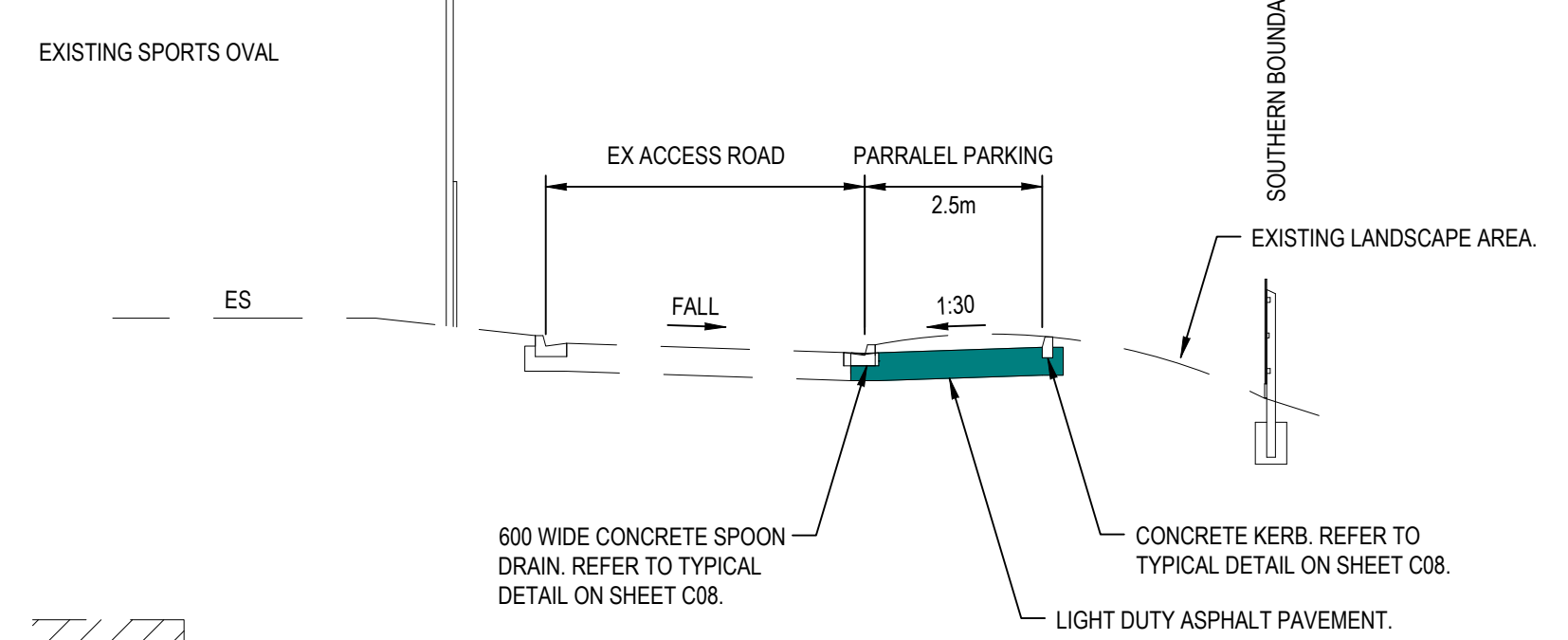
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VICTORIA 3133
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Drawing Title:
CIVIL DETAILS

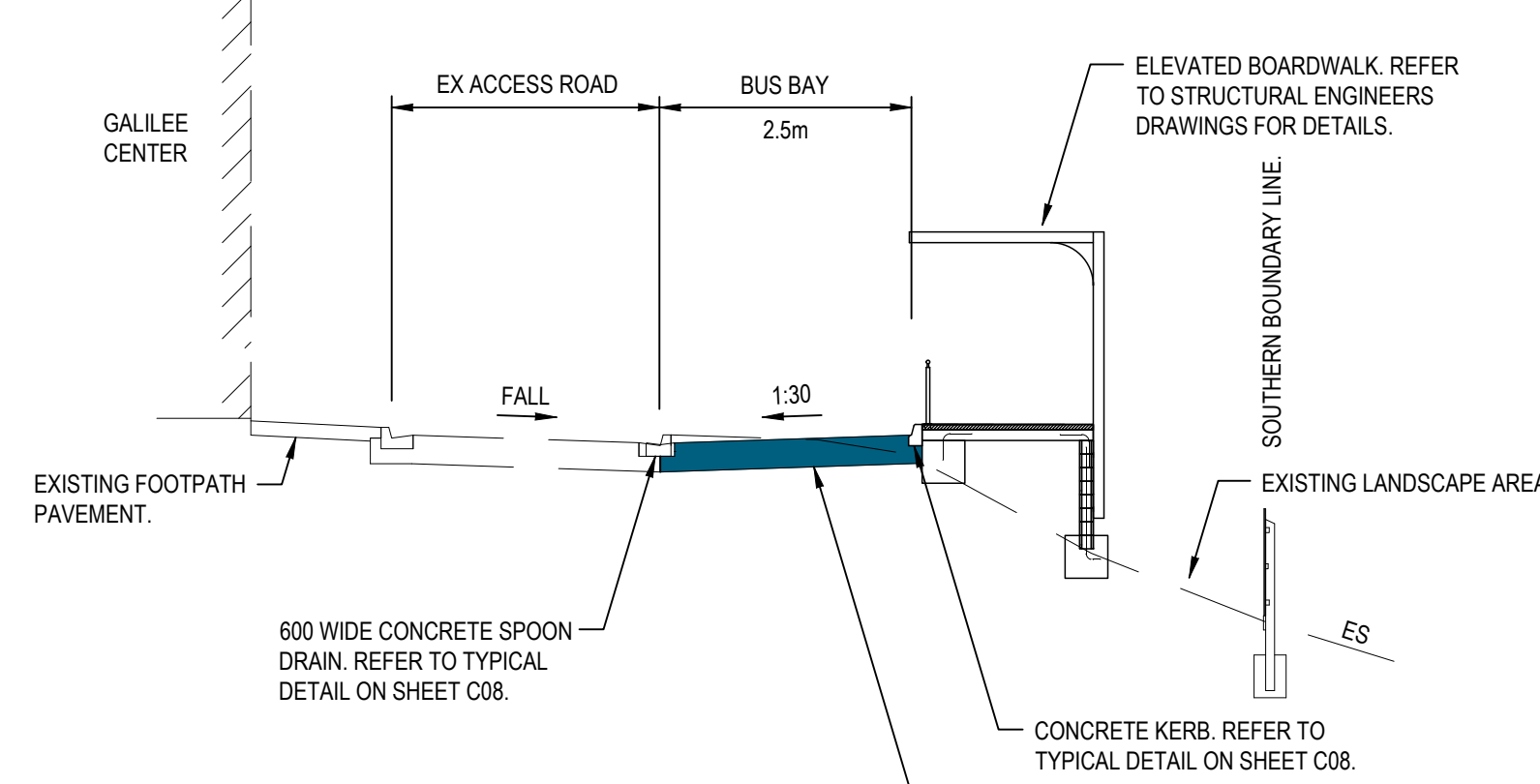
Drawing No.:
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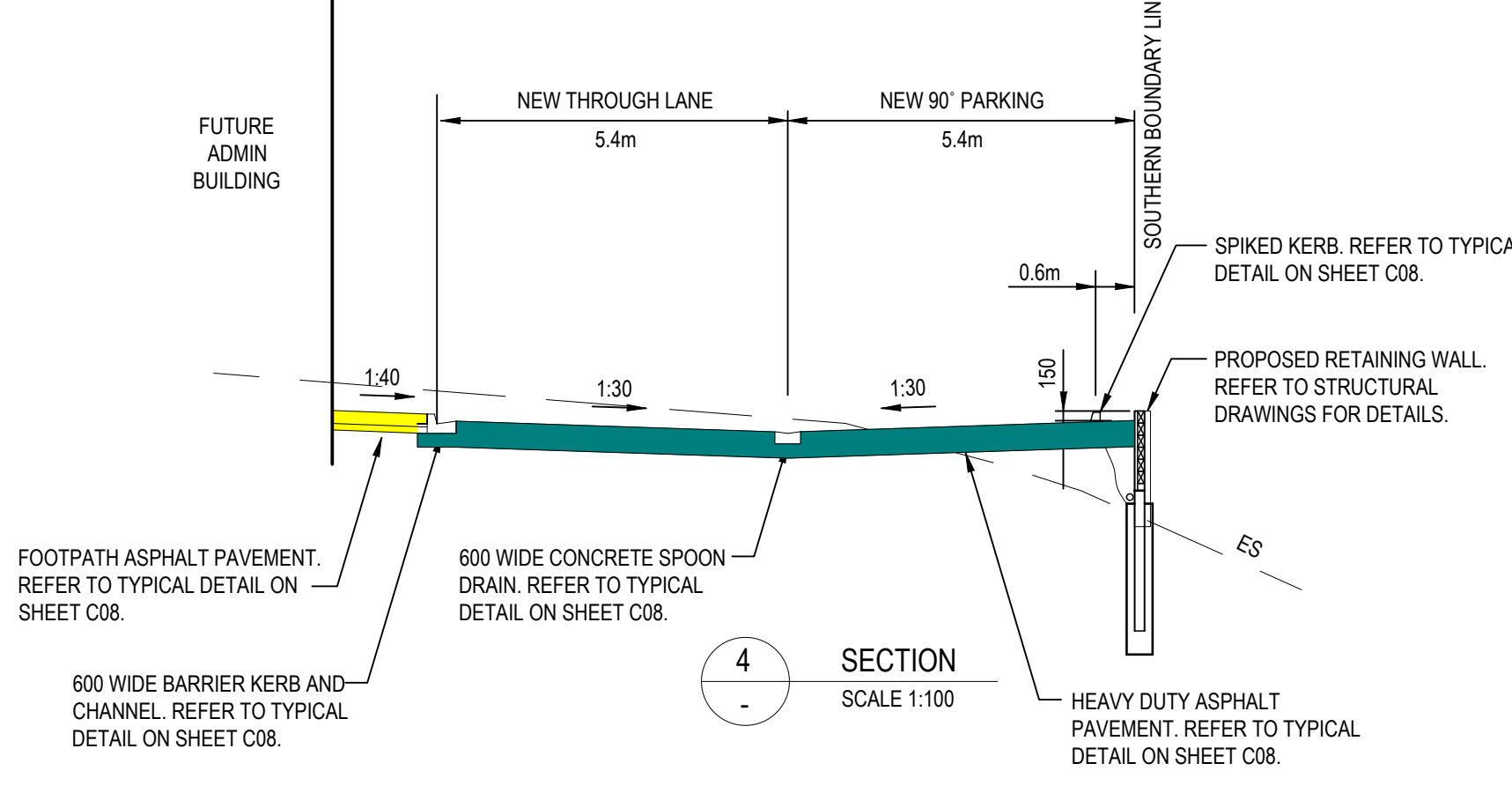
1 SECTION
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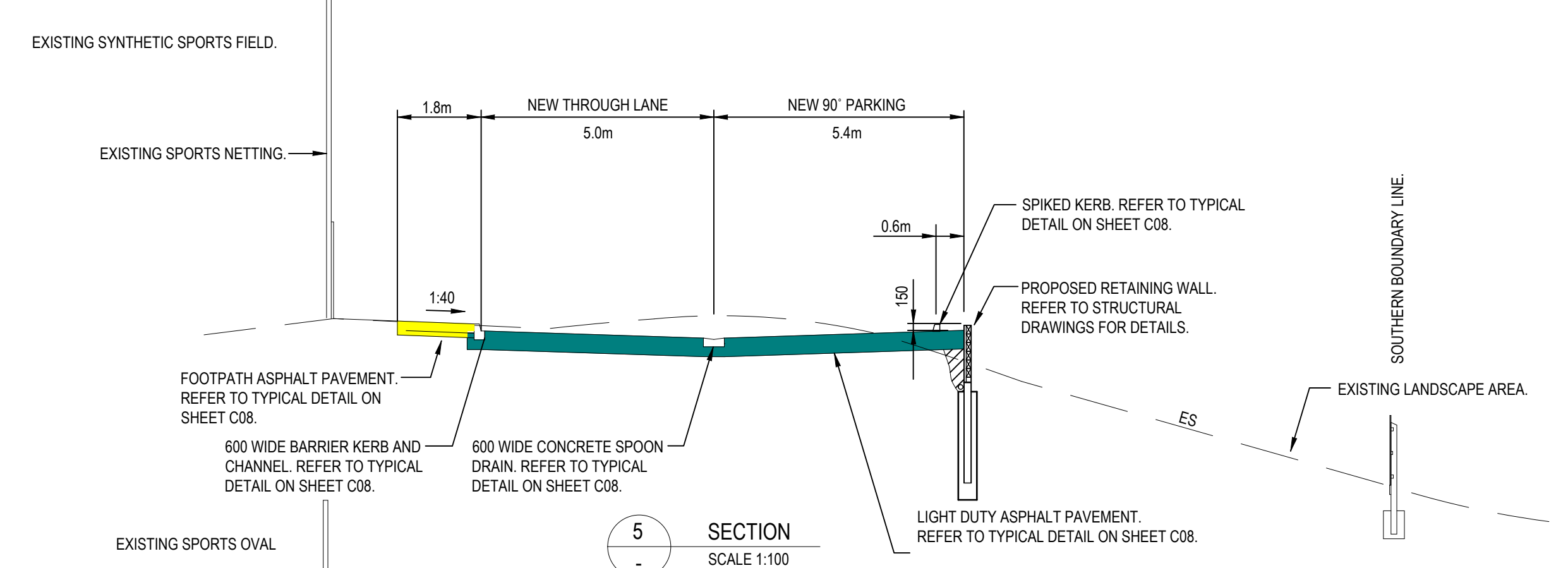
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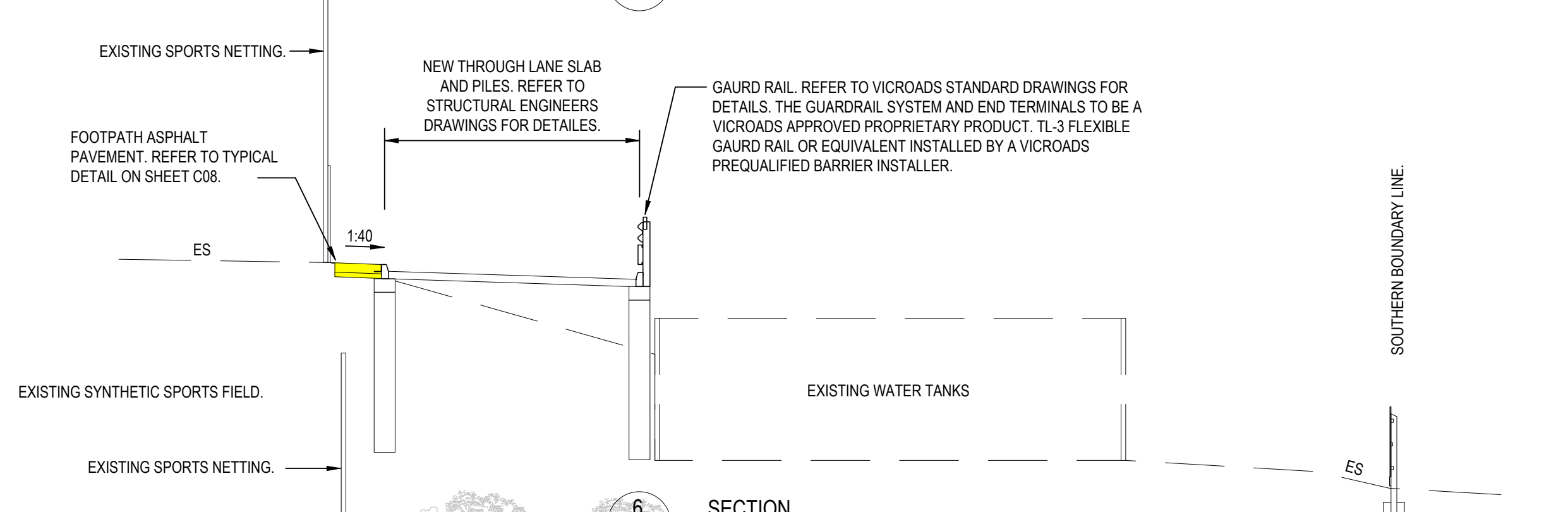
3 SECTION
SCALE 1:100



4 SECTION
SCALE 1:100

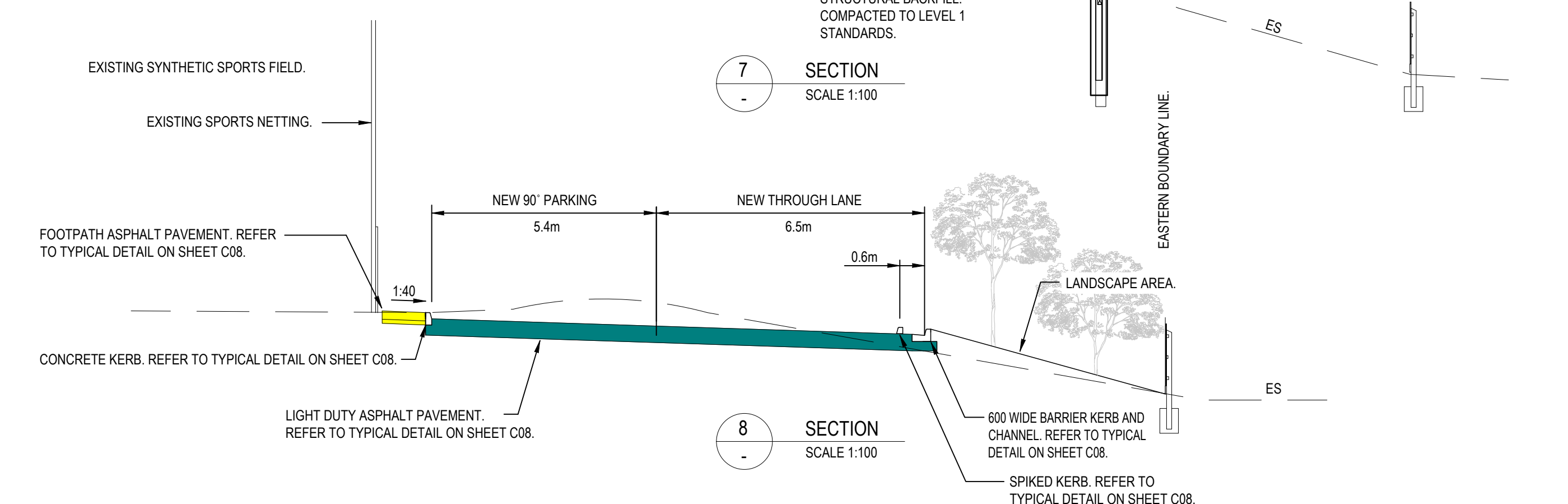


5 SECTION
SCALE 1:100

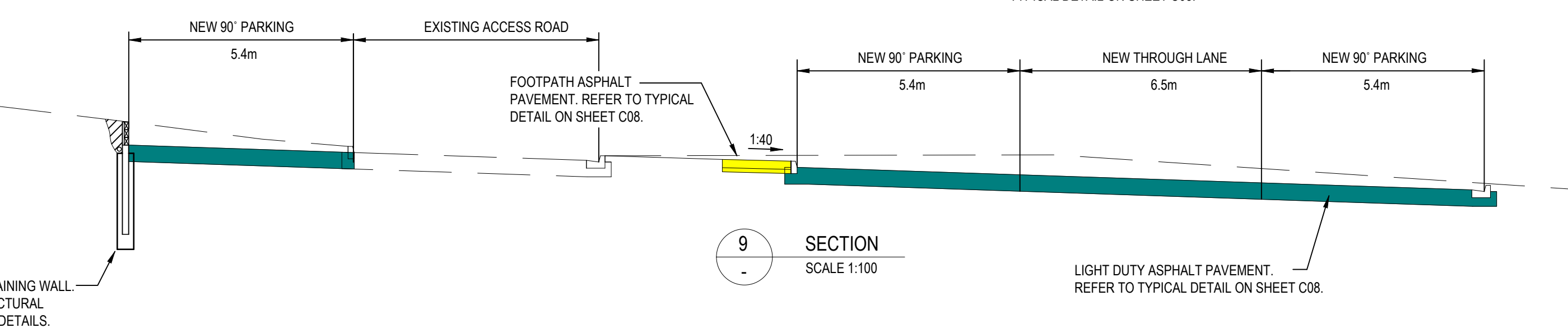


6 SECTION
SCALE 1:100

ADVERTISED PLAN



7 SECTION
SCALE 1:100



8 SECTION
SCALE 1:100



9 SECTION
SCALE 1:100

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CIVIL PLANS	
Designed	Date
R McEWAN / M MASINA	NOV 2023
Drawn	Scale
M MASINA	1:100 @ A1 SHEET



Project Title:
EMMAUS COLLEGE, VERMONT CAMPUS
503 SPRINGVALE ROAD, VERMONT SOUTH,
VICTORIA 3133
CITY OF WHITEHORSE

Drawing Title:
TYPICAL SECTIONS

Drawing No.:
07 23 24 C09

PIT SCHEDULE										
No.	PIT TYPE	FROM	PIT SIZE LENGTH x WIDTH	DIA. IN	IL IN	DIA. OUT	IL OUT	COVER LEVEL	DEPTH TO BASE	REMARKS
E1	EX SIDE ENTRY PIT	-	EX	225	111.60	Ex300	Ex111.57	Ex112.22	Ex0.65	CONNECT INTO EXISTING PIT AND ADJUST EXISTING SIDE ENTRY PIT LID TO NEW RADIUS SHOWN.
P1	SIDE ENTRY PIT	E1	900x600	-	-	225	112.36	113.26	0.90	CONSTRUCT SIDE ENTRY PIT. INSTALL CLASS C SOLID COVER. REFER TO TYPICAL DETAIL ON SHEET C08.
E2	EX JUNCTION PIT	-	EX	300	111.60	Ex300	Ex110.44	Ex112.86	Ex2.42	CONNECT INTO EXISTING PIT.
P2	GRADED SIDE ENTRY PIT	E2	900x600	-	-	300	111.66	112.56	0.90	CONSTRUCT GRADED SEP PIT. INSTALL CLASS D GALV. GRATED COVER. REFER TO TYPICAL DETAIL ON SHEET C08.
P3	GRADED SIDE ENTRY PIT	EX	900x600	-	-	300	110.90	111.70	0.80	CONSTRUCT GRADED SEP PIT. INSTALL CLASS D GALV. GRATED COVER. REFER TO TYPICAL DETAIL ON SHEET C08.
P4	GRADED SIDE ENTRY PIT	EX	900x600	-	-	300	109.50	110.40	0.90	CONSTRUCT GRADED SEP PIT. REFER TO TYPICAL DETAIL ON SHEET C08. INSTALL CLASS D GALV. GRATED COVER.
E3	EX JUNCTION PIT	-	EX	300	104.97	Ex525	Ex104.75	Ex105.75	Ex1.00	CONNECT INTO EXISTING PIT.
P5	GRADED SIDE ENTRY PIT	EX	900x900	-	-	300	106.30	109.25	2.95	CONSTRUCT GRADED SEP PIT. INSTALL CLASS D GALV. GRATED COVER. REFER TO TYPICAL DETAIL ON SHEET C08.
P6	GRADED JUNCTION PIT	OP	900x600	-	-	300	108.56	109.46	0.90	CONSTRUCT GRADED JUNCTION PIT. INSTALL CLASS D GALV. GRATED COVER. REFER TO TYPICAL DETAIL ON SHEET C08.
P7	SIDE ENTRY PIT	-	900x600	Ex300	Ex108.50	Ex300	Ex108.50	110.00	1.50	CONSTRUCT SIDE ENTRY PIT. INSTALL CLASS B GALV GRATED COVER.REFER TO TYPICAL DETAIL ON SHEET C03.
P8	GRADED JUNCTION PIT	-	900x900	Ex525	108.30	Ex525	108.30	110.58	2.28	CONSTRUCT GRADED JUNCTION PIT. INSTALL CLASS D GALV. GRATED COVER. REFER TO TYPICAL DETAIL ON SHEET C08.
E4	EX JUNCTION PIT	-	EX	300	110.21	150	Ex110.14	Ex111.25	Ex1.11	CONNECT INTO EXISTING PIT.
P9	GRADED JUNCTION PIT	E4	900x600	-	-	300	111.60	112.50	0.90	CONSTRUCT GRADED JUNCTION PIT. INSTALL CLASS D GALV GRATED COVER.REFER TO TYPICAL DETAIL ON SHEET C08.
P10	EX SIDE ENTRY PIT	-	EX900x600	-	-	EX	EX	EX	EX113.85	ADJUST EXISTING SIDE ENTRY PIT LID TO NEW RADIUS SHOWN.
P11	GRADED JUNCTION PIT	-	900x600	Ex300	Ex112.93	Ex300	Ex112.93	114.40	1.47	CONSTRUCT GRADED JUNCTION PIT. INSTALL CLASS D GALV GRATED COVER. REFER TO TYPICAL DETAIL ON SHEET C08.
E5	EX JUNCTION PIT	-	EX	Ex300	Ex114.34	300	114.14	115.95	Ex1.81	CONNECT INTO EXISTING PIT. ADJUST EXISTING GRATE TO NEW PAVEMENT LEVEL.
P12	GRADED JUNCTION PIT	E5	450x450	150	114.43	225	114.43	114.96	0.53	CONSTRUCT GRADED JUNCTION PIT. INSTALL CLASS B GALV GRATED COVER. REFER TO TYPICAL DETAIL ON SHEET C08.
P13	GRADED JUNCTION PIT	-	350x350	-	-	150	114.70	115.00	0.30	CONSTRUCT GRADED JUNCTION PIT. INSTALL CLASS B GALV GRATED COVER. REFER TO TYPICAL DETAIL ON SHEET C08.
P14	SIDE ENTRY PIT	-	900x600	Ex225	Ex115.87	300	115.90	117.40	1.53	CONSTRUCT SIDE ENTRY PIT. INSTALL CLASS C SOLID COVER. REFER TO TYPICAL DETAIL ON SHEET C08.
P15	JUNCTION PIT	P14	900x600	Ex300	Ex119.75	300	119.70	121.00	1.30	CONSTRUCT JUNCTION PIT. INSTALL CLASS B GALV GRATED COVER. REFER TO TYPICAL DETAIL ON SHEET C03.

COVER CLASS	PIT & COVER TYPE						
	PP	MCI	GM	RC	TG	PT	PG
A = PEDESTRIAN AREAS							
B = LIGHT DUTY							
C = MEDIUM DUTY							
D = HEAVY DUTY							
E = EXTRA HEAVY DUTY							
F = EXTRA HEAVY DUTY							
G = EXTRA HEAVY DUTY							
SUPPLIERS	PREFORMED PITS	METAL & CONCRETE INFILL PIT COVERS	GALVANISED METAL GRATES	PRECAST CONCRETE PIT COVERS	TRENCH GRATES	PRECAST TRENCHES	POLYPROPYLENE GRATED COVERS
GATIC Ph: 1800 335 303							
S.V.C. Ph: 03 9580 6644							
WEBFORGE Ph: 03 8551 2414							
HK METAL PRODUCTS Ph: 03 9580 0146							
AUS PITS Ph: 03 5222 4526							
EVERHARD Ph: 13 19 26							
ACO POLYCRETE Ph: 1300 765 226							
R&S GRATING Ph: 03 9238 5888							
ALL PIT COVERS AND GRATES MUST COMPLY WITH AS3996-2006 "ACCESS COVERS AND GRATES"							
SUPPLIERS OF PIT COVERS & PREFORMED PITS							

ORIFICE CALCULATIONS
PEAK ALLOWABLE DISCHARGE $Q_p = 4.50 \sqrt{PSD}$
ORIFICE DIAMETER $d = 21.9 \sqrt{PSD / \sqrt{H}}$
$d = 21.9 \sqrt{4.5 / \sqrt{0.45}}$
$d = 58.5$
ADOPT DIAMETER OF BURIED PIPE ORIFICE OUTLET AS 58mm

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ADVERTISED PLAN

DRAINAGE NOTES

- 1) THE CONTRACTOR IS TO READ THESE DETAILS IN CONJUNCTION WITH ALL RELEVANT COUNCIL STANDARD DETAILS AND SPECIFICATIONS.
- 2) ALL PITS AND PIT COVERS ARE TO BE CONSTRUCTED AS DETAILED AND IN ACCORDANCE WITH COUNCIL STANDARDS.
- 3) ALL PVC PIPES ARE TO BE SEWER CLASS UPVC UNLESS NOTED OTHERWISE.
- 4) ALL RCP PIPES ARE TO BE RRJ CLASS 2 CONCRETE PIPES
- 5) ALL PITS DEEPER THAN 900mm ARE TO BE FITTED WITH STEP IRONS REFER TYPICAL DETAIL.
- 6) ALL PITS ARE TO BE CONSTRUCTED OF CONCRETE.
 - 7) ALL GRATED PITS ARE TO BE FITTED WITH BIKE SAFE GRATES.
 - 8) CONTRACTOR TO CONFIRM EXISTING INVERT LEVEL OF KERB AND CHANNEL PRIOR TO COMMENCEMENT OF WORKS.
 - 9) ALL GRATED PITS ARE TO BE HOT DIPPED GALVANISED



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Drawn	Scale
M MASINA	1:100 @ A1 SHEET



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503 SPRINGVALE ROAD, VERMONT SOUTH,
VICTORIA 3133
CITY OF WHITEHORSE

Drawing Title :
DRAINAGE LONGITUDINAL SECTIONS
AND PIT SCHEDULE

Drawing No :
07 23 24 C10