

Appendix A1

**COSTIN ROE CONSULTING DRAWINGS
STORMWATER DRAINAGE DESIGN PACKAGE**

STORMWATER DESIGN DRAWING PACKAGE
YIRIBANA LOGISTICS ESTATE
754-786 MAMRE ROAD, KEMPS CREEK, NSW, 2178

DRAWING LIST

DRAWING NO.	DRAWING TITLE
C013874.06- SDD100	DRAWING LIST AND LOCALITY PLAN

C013874.06- SDD400	STORMWATER DRAINAGE MASTER PLAN
C013874.06- SDD401	PRE-DEVELOPMENT STORMWATER CATCHMENT PLAN
C013874.06- SDD402	POST DEVELOPMENT INTERIM CATCHMENT PLAN
C013874.06- SDD405	WATER SENSITIVE URBAN DESIGN CONCEPT PLAN

C013874.06- SDD410	ROADWORKS STORMWATER DRAINAGE PLAN - SHEET 1
C013874.06- SDD411	ROADWORKS STORMWATER DRAINAGE PLAN - SHEET 2

C013874.06- SDD431	ESTATE BASIN 1 PLAN
C013874.06- SDD432	OSD TANK PLAN
C013874.06- SDD432	ESTATE BASIN 2 PLAN
C013874.06- SDD434	ESTATE BASIN SECTIONS - SHEET 1
C013874.06- SDD435	ESTATE BASIN SECTIONS - SHEET 2

C013874.06 - SDD451	STORMWATER DRAINAGE DETAILS - SHEET 1
C013874.06 - SDD452	STORMWATER DRAINAGE DETAILS - SHEET 2
<u>C013874.06 - SDD453</u>	<u>STORMWATER DRAINAGE DETAILS - SHEET 3</u>
C013874.06 - SDD454	STORMWATER DRAINAGE DETAILS - SHEET 4
C013874.06 - SDD455	STORMWATER DRAINAGE DETAILS - SHEET 5
C013874.06 - SDD456	STORMWATER DRAINAGE DETAILS - SHEET 6

C013874.06- SDD460	TYPICAL SECTIONS - SHEET 1
C013874.06- SDD461	TYPICAL SECTIONS - SHEET 2
C013874.06- SDD462	TYPICAL SECTIONS - SHEET 3

C013874.06-SDD470	STORMWATER DRAINAGE LONGSECTIONS - SHEET 1
C013874.06-SDD471	STORMWATER DRAINAGE LONGSECTIONS - SHEET 2
C013874.06-SDD472	STORMWATER DRAINAGE LONGSECTIONS - SHEET 3

GENERAL NOTES:

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT STANDARDS AUSTRALIA CODES AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARYED BY THE PROJECT SPECIFICATION.
3. ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS. ENGINEER'S DRAWINGS ISSUED IN ANY ELECTRONIC FORMAT MUST NOT BE USED FOR DIMENSIONAL SETOUT. REFER TO THE ARCHITECT'S DRAWINGS FOR ALL DIMENSIONAL SETOUT INFORMATION.
4. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES. UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.
6. ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH ACCEPTABLE SAFETY STANDARDS & APPROPRIATE SAFETY SIGNS SHALL BE INSTALLED AT ALL TIMES DURING THE PROGRESS OF THE JOB.

ELECTRONIC INFORMATION NOTES:

- 1 THE ISSUED DRAWINGS IN HARD COPY OR PDF FORMAT TAKE PRECEDENCE OVER ANY
2 ELECTRONICALLY ISSUED INFORMATION, LAYOUTS OR DESIGN MODELS.
3 THE CONTRACTOR'S DIRECT AMENDMENT OR MANIPULATION OF THE DATA OR
4 INFORMATION THAT MIGHT BE CONTRACTUAL OR AN OWNER-SUPPLIED DIGITAL
5 TERRAIN MODEL AND ITS SUBSEQUENT USE TO UNDERTAKE THE WORKS WILL BE SOLELY
6 AT THE DISCRETION OF AND THE RISK OF THE CONTRACTOR.
7 THE CONTRACTOR IS REQUIRED TO HIGHLIGHT ANY DISCREPANCIES BETWEEN THE DIGITAL
8 TERRAIN MODEL AND INFORMATION PROVIDED IN THE CONTRACT AND/OR DRAWINGS AND
9 IS REQUIRED TO SEEK CLARIFICATION FROM THE SUPERINTENDENT.
10 THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY UNFORSEEN AND/OR ONGOING NEED
11 TO UPDATE THE DIGITAL TERRAIN MODEL. SHOULD THERE BE ANY AMENDMENTS OR
12 CHANGES TO THE DRAWINGS OR CONTRACT INITIATED BY THE CONTRACTOR.

SURVEY NOTE:

1. EXISTING SITE LEVELS AND DETAILS BASED ON A PLAN OF SURVEY '11019-001' BY 'BOXALL SURVEYORS PTY. LTD.' DATED 23.07.2020.

EXISTING SERVICES NOTES:

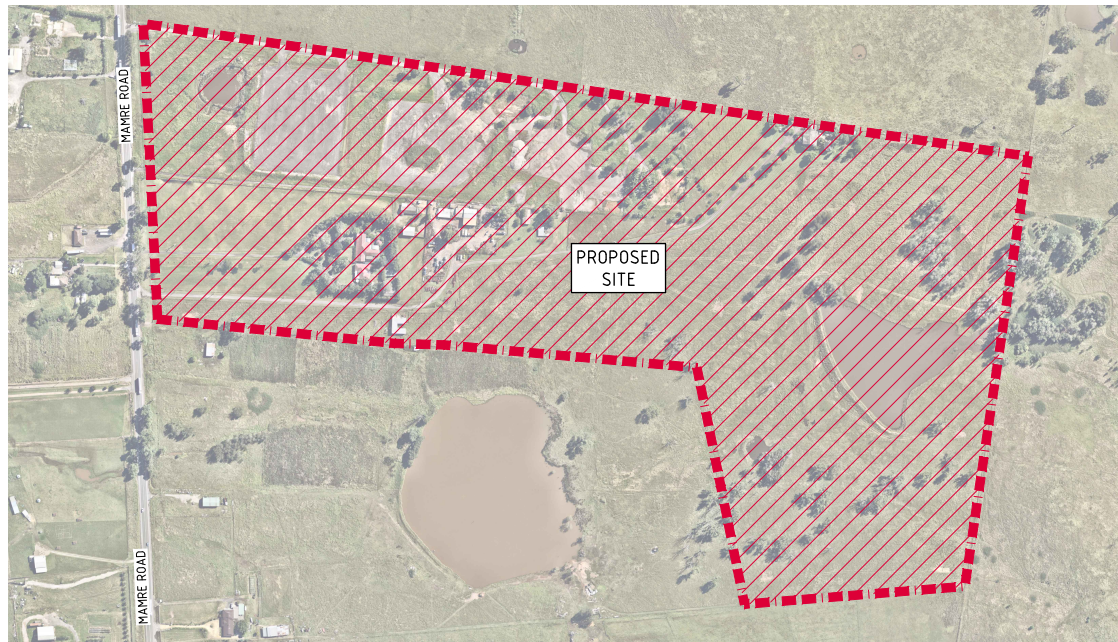
1. DURING THE EXECUTION OF WORKS, THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING SERVICES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED TO THE EXISTING SERVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE RELEVANT SERVICE AUTHORITY, AT NO COST TO THE PRINCIPAL.
2. WHERE IT IS NECESSARY TO REMOVE, DIVERT OR CUT INTO ANY EXISTING SERVICE, THE CONTRACTOR SHALL GIVE AT LEAST THREE (3) DAYS NOTICE OF ITS REQUIREMENTS TO THE SUPERINTENDENT, WHO WILL ADVISE WHAT ARRANGEMENTS SHOULD BE MADE FOR THE ALTERATION OF SUCH EXISTING WORKS.
3. EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA. THE ACCURACY IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO COMMENCING WORK. ALL CLEARANCES AND APPROVALS SHALL ALSO BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY PRIOR TO THE COMMENCEMENT OF WORK.
4. ALL NEW AND EXHUMED SERVICES THAT CROSS EXISTING AND FUTURE ROADS/PAVEMENTS WITHIN THE SITE SHALL BE BACKFILLED WITH DGB20 MATERIAL TO SUBGRADE LEVEL AND COMPACTED TO 98% STANDARD DENSITY RATIO. SUBJECT TO PRIOR APPROVAL FROM RELEVANT AUTHORITY.
5. ON COMPLETION OF SERVICES INSTALLATION, ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AREAS, GRASSED AREAS AND ROAD PAVEMENTS.
6. CARE TO BE TAKEN WHEN EXCAVATING NEAR UTILITY SERVICES. NO MECHANICAL EXCAVATION TO BE UNDERTAKEN NEAR UTILITY SERVICES. USE WITH RELEVANT AUTHORITY.
7. THE CONTRACTOR SHALL ALLOW FOR THE STOPPING OFF, EXCAVATION AND REMOVAL IF REQUIRED OF ALL EXISTING SERVICES IN AREAS AFFECTED BY THE WORKS WITHIN THE CONTRACT AREA AS SHOWN ON THE DRAWINGS UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT. ALL TO REGULATORY AUTHORITY STANDARDS AND APPROVAL. THE CONTRACTOR IS TO MAINTAIN EXISTING STORMWATER DRAINAGE FLOWS THROUGH THE ROADS AT ALL TIMES. MAKE DUE ALLOWANCE FOR ALL SUCH FLOWS AT ALL TIMES.
8. PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL OBTAIN THE SUPERINTENDENT'S APPROVAL OF THE PROGRAM FOR THE RELOCATION/CONSTRUCTION OF TEMPORARY SERVICES.
9. CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES AS REQUIRED TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED, THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
10. INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE OR DAMAGE TO THE ADJACENT RESIDENCES. CONTRACTOR TO GAIN APPROVAL OF THE SUPERINTENDENT FOR TIME OF INTERRUPTION.
11. THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG (DBYO 1100) SERVICES SEARCH BEFORE THE COMMENCEMENT OF ANY WORKS.

FINISHED LEVELS PLAN NOTES:

1. LEVELS DATUM IS AUSTRALIAN HEIGHT DATUM (A.H.D.)
2. GRADING REQUIREMENTS TO BE COMPLETED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2890.1, AS2890.2 AND AS2890.6.
3. ALL CONTOUR LINES & SPOT LEVELS INDICATE FINISHED PAVEMENT LEVELS U.N.O. ON PLAN.
4. CONTOUR INTERVALS
 - THE MINOR CONTOUR INTERVAL IS 0.1m.
 - THE MAJOR CONTOUR INTERVAL IS 0.5m.
5. HARDESTAND GRADING
 - MINIMUM PAVEMENT GRADE IS TO BE 1:100 (1%).
 - GRADING OF ON-GRADE DOCKS TO BE 1:100 (1%) FALL AWAY FROM THE DOCK FACE FOR A LENGTH OF 15m U.N.O.
 - GRADING OF TRUCK CIRCULATION ZONES TO BE MINIMUM AS NOTED ABOVE, 3-4% NOMINAL AND MAX 5%.
6. CAR PARKING AREA GRADES
 - MINIMUM PAVEMENT GRADE IS TO BE 1:100 (1%), DESIRABLE MINIMUM GRADE 1:50 (2%).
 - MAXIMUM PAVEMENT GRADE IS TO BE 1:20 (5%) IN CARPARKING AREAS AND 1:25 (4%) ELSEWHERE.
 - DISABLED ACCESS PARKING ZONES AND SHARED SPACE TO BE MAXIMUM OF 1:33 (3%) IN ASPHALT PAVEMENT AND MAXIMUM OF 1:40 (2.5%) IN CONCRETE PAVEMENT.
 - CARPARK RAMP GRADES TO BE MAX 1:5 WITH 2.5m SMOOTH TRANSITION AT TOP AND BOTTOM U.N.O.
7. TRUCK RAMP GRADES
 - MAXIMUM 8-DOUBLE OR 19.0m AV RAMP GRADES ARE TO BE 1:8.3 (12%) U.N.O. ON PLAN
 - PROVIDE MINIMUM 4.0m LONG TRANSITION WHERE CHANGES OF GRADE EXCEED 1:20 (5%) AT A CREST U.N.O.
 - PROVIDE MINIMUM 3.0m LONG TRANSITION WHERE CHANGE OF GRADE EXCEED 1:20 (5%) AT A SAG U.N.O.
 - TRANSITIONS ARE TO PROVIDE A SMOOTH CONTINUOUS CIRCULAR AND TANGENTIAL CHANGE IN GRADE TO ENSURE NO SHARP OR ACUTE CHANGES IN GRADE ARE PRESENT.
8. WHERE FIRE BRIGADE ACCESS IS REQUIRED, MAXIMUM RAMP GRADIENTS ARE TO BE 1:6 (16.6%) DESIRABLE RAMP GRADIENTS ARE TO BE 1:8 (12.5%) WITH 7m TRANSITION TOP AND BOTTOM U.N.O. ON PLAN.
9. PERMANENT BATTER SLOPES ARE TO HAVE A MAXIMUM GRADE OF 1V:3H U.N.O. BASED ON GEOTECHNICAL ASSESSMENT. PROVIDE MINIMUM 0.5m BERM BETWEEN THE BACK OF KERB OR PAVEMENT EDGES AND THE TOP OR TOE OF A BATTER.
10. ALL BATTER SLOPE WITH GRADES AT OR EXCEEDING 1V:6H ARE TO BE TURFED IMMEDIATELY AFTER EXPOSED EROSION CONTROL IS TO BE PROVIDED TO THE SATISFACTION OF THE ENGINEER.
11. ALL FOOTPATHS ARE TO FALL AWAY FROM THE BUILDING AT 2.5% NOMINAL GRADE.
12. ALL PAVEMENTS ARE TO BE SET AT 30mm BELOW THE FINISHED FLOOR LEVEL OF THE WAREHOUSE AND OFFICE AREAS. PROVIDE LOCAL FEATHERING AT DOORWAYS OR ROLLER SHUTTERS TO PROVIDE FLUSH FINISH AS REQUIRED.
13. WHERE NEW AND EXISTING INTERFACING IS REQUIRED, MATCH EXISTING LEVELS AND PROVIDE SMOOTH INTERFACE BETWEEN NEW AND EXISTING GRADIENTS. REFER ANY CONCERNS TO THE ENGINEER.

TRAFFIC CONTROL NOTES:

1. TRAFFIC CONTROLS TO COMPLY WITH AS 1742.3-2002
2. TRAFFIC CONTROL PLANS TO BE SUBMITTED AND CERTIFIED BY AN ACCREDITED WORK SITE OPERATIVE.
3. AS PART OF THE TRAFFIC CONTROL PLAN ENSURE THAT PEDESTRIANS ARE CATERED FOR.
4. AFTER-HOURS TRAFFIC CONTROL THROUGH THE WORKSITE HAVE TO BE CATERED FOR.



LOCALITY PLAN
NTS

PCC NOTES:

ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH PENRITH
CITY COUNCIL STANDARDS AND SPECIFICATIONS:

STORMWATER DRAINAGE NOTES:

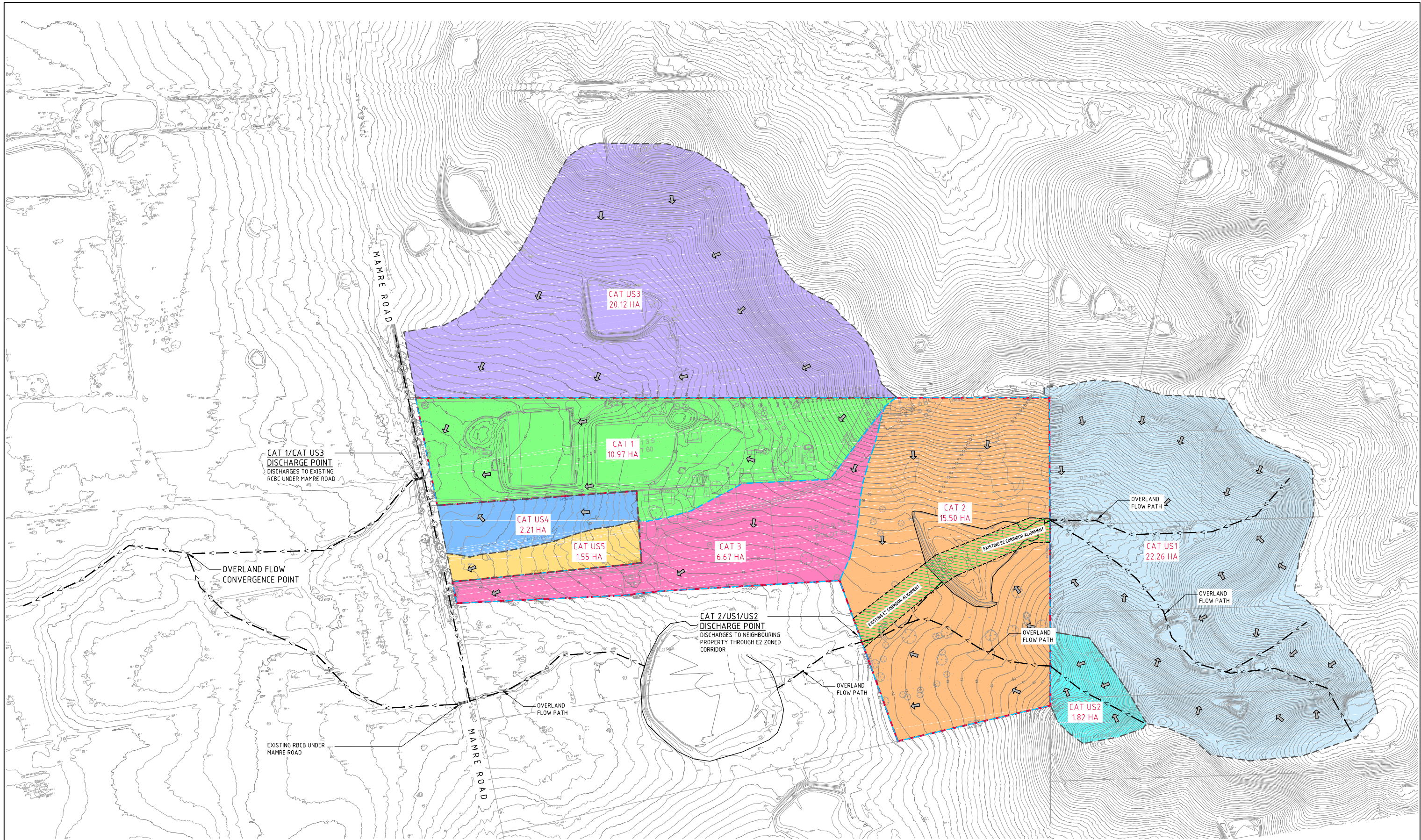
STORMWATER DRAINAGE NOTES ARE APPLICABLE FOR PRIVATE INTERNAL STORMWATER DRAINAGE WORKS ONLY. REFERENCE SHOULD BE MADE TO THE RELEVANT COUNCIL/ROADS AUTHORITY GUIDELINES AND SPECIFICATIONS FOR ALL STORMWATER DRAINAGE WORKS NOT PART OF THE PRIVATE INTERNAL WORKS.

1. ALL STORMWATER WORKS TO BE COMPLETED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS3500.3 PLUMBING AND DRAINAGE, PART 3: STORMWATER DRAINAGE.
2. THE MINOR (PIPED) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 20 YEAR AIR STORM EVENT AND THE MAJOR (OVERLAND) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 100 YEAR AIR STORM EVENT.
3. PIT SIZES SHALL BE AS INDICATED IN THE SCHEDULE WHILE PIPE SIZES AND DETAILS ARE PROVIDED ON PLAN.
4. EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED BY SURVEY PRIOR TO COMMENCING WORKS ON SITE.
5. PRIVATE STORMWATER PIPES @375 OR GREATER SHALL BE CLASS 2 (WITH HS2 SUPPORT) REINFORCED CONCRETE WITH RUBBER RING JOINTS UNLESS NOTED OTHERWISE. PUBLIC DOMAIN STORMWATER PIPES ARE TO BE MINIMUM CLASS 3 AND CLASS 4 WHERE ROAD CROSSINGS ARE REQUIRED.
6. ALL PIPES UP TO AND INCLUDING @300 TO BE UPVC GRADE SN8 UNDO.
7. PIPE CLASS NOMINATED ARE FOR IN-SERVICE LOADING CONDITIONS ONLY. CONTRACTOR IS TO MAKE ANY NECESSARY ADJUSTMENTS REQUIRED FOR CONSTRUCTION CONDITIONS.
8. ALL CONCRETE PITS GREATER THAN 1000mm DEEP SHALL BE REINFORCED USING N12-200 EACH WAY CENTERED IN WALL AND BASE. LAP MINIMUM 300mm WHERE REQUIRED. ALL CONCRETE FOR PITS SHALL BE C_{25} MPa. PRECAST PITS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
9. IN ADDITION TO ITEM 5 ABOVE, ALL CONCRETE PITS GREATER THAN 3000mm DEEP SHALL HAVE WALLS AND BASES INCREASED TO 200mm.
10. PIPE SIZES SHALL BE AS PER PIPE LAYING DETAILS. PARTICULAR CARE SHALL BE TAKEN TO ENSURE THAT THE PIPE IS FULLY AND EVENLY SUPPORTED. RAM AND PACK FILLING AROUND AND UNDER BACK OF PIPES AND PIPE FAUCETS, WITH NARROW DEEDED RAMPERS OR OTHER SUITABLE TAMPING DETAILS.
11. CONCRETE PIPES UNDER, OR WITHIN THE ZONE OF INFLUENCE OF PAVED AREAS SHALL BE Laid USING HS2 TYPE SUPPORT, AS A MINIMUM, IN ACCORDANCE WITH AS 3725. AGGREGATE BACKFILL SHALL NOT BE USED FOR PIPE BEDDING AND OR

- HAUNCH/SIDE SUPPORT.
- WHERE PIPE LINE ENTERS PITS, PROVIDE 2m LENGTH OF STOCKING WRAPPED SLOTTED Ø100 uPVC TO EACH SIDE OF PIPE.
- ALL SUBSIDI DRAINAGE LINES SHALL BE Ø100 SLOTTED uPVC WITH APPROVED FILTER WRAP LAD IN 300mm wide GRANULAR FILTER UNLESS NOTED OTHERWISE.
- LAY SUBSIDI LINES TO MATCH FALLS OF LAND AND/OR IN 200 MINIMUM. PROVIDE PIPE CLEANING EYE (RODDING POINT) AT UPSTREAM END OF LINE AND AT 30m MAX. CTS PROVIDE SUBSIDI LINES TO ALL PAVEMENT/ LANDSCAPED INTERFACES, TO REAR OF RETAINING WALLS (AS NOMINATED BY STRUCTURAL ENGINEER) AND AS SHOWN ON PLAN.
- WHERE SUBSIDI DRAINAGE PASSES UNDER A PAVEMENT OR A SLAB, UNSLOTTED UPVC ARE TO BE PROVIDED UNLESS NOTED OTHERWISE.
- ALL PIPE GRADES IN 200 MINIMUM UNO.
- PROVIDE STEP IRONS IN PITS DEVERT THAN 1000mm.
- MIN. 600 COVER TO PIPE OBEYER BENEATH ROADS & MIN. 400 COVER BENEATH LANDSCAPED AND PEDESTRIAN AREAS.
- THE COVERS IN TRAFFICABLE AREAS SHALL BE CLASS D 'HEAVY DUTY'; THOSE LOCATED IN NON-TRAFFICABLE AREAS SHALL BE CLASS B 'MEDIUM DUTY' UNO.
- PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
- DOWN PIPES (DP) TO BE AS PER HYDRAULIC ENGINEERS DETAILS WITH CONNECTOR TO MATCH DP SIZE UNO. ON PLAN. PROVIDE CLEANING EYE AT GROUND LEVEL.
- PIPE LENGTHS NOMINATED ON PLAN OR LONGSECTIONS ARE MEASURED FROM CENTER OF PITS TO THE NEAREST 0.5m AND DO NOT REPRESENT ACTUAL LENGTH.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING, WHERE CONNECTION TO EXISTING UNDERDRAINAGE SYSTEMS, OPEN SWALES, CHANNELS OR ANY OTHER EXISTING SYSTEM, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND INVERT ON SITE AT THE BEGINNING OF THE CONSTRUCTION PERIOD. REFER ANY VARIANCE FROM DOCUMENTATION OR SURVEYS TO THE ENGINEER FOR CLARIFICATION.

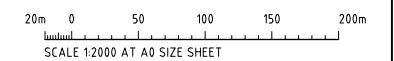
FOR INFORMATION

ISSUED FOR INFORMATION 23.02.24 C ISSUED FOR INFORMATION 08.12.23 B ISSUED FOR INFORMATION 05.12.23 A AMENDMENTS DATE ISSUE AMENDMENTS DATE ISSUE AMENDMENTS DATE ISSUE										ARCHITECT SBA ARCHITECTS Scale 1:100, 83 Mount Street, North Sydney NSW 2060 02 9559 8858 02 9559 8858 info@sbaarchitects.com.au www.sbaarchitects.com.au										CLIENT gpt										PROJECT YIRIBANA LOGISTICS ESTATE ABN 50 003 696 446 754-770 & 784-786 MAMRE ROAD KEMPS CREEK NSW DESIGNED DATE DRAWN DATE CHECKED SIZE SCALE CAD REF DS 10/07/23 NZ 10/07/23 AS SHOWN C103874.06-SD000										CONSULT CONSULT AUSTRALIA Costin Roe Consulting Pty Ltd. ABN 50 003 696 446 PO Box 1419 Sydney NSW 1220 Level 4, 5 Windmill Street, Millers Point NSW 2000 p+61-2-9251 7695 e+61-2-9241 5731 m+mail@costinroe.com.au w+costinroe.com.au										CRC COSTIN ROE CONSULTING CIVIL & STRUCTURAL ENGINEERS										DRAWING TITLE DRAWING LIST & LOCALITY PLAN DRAWING NO. C013874.06-SD0100									
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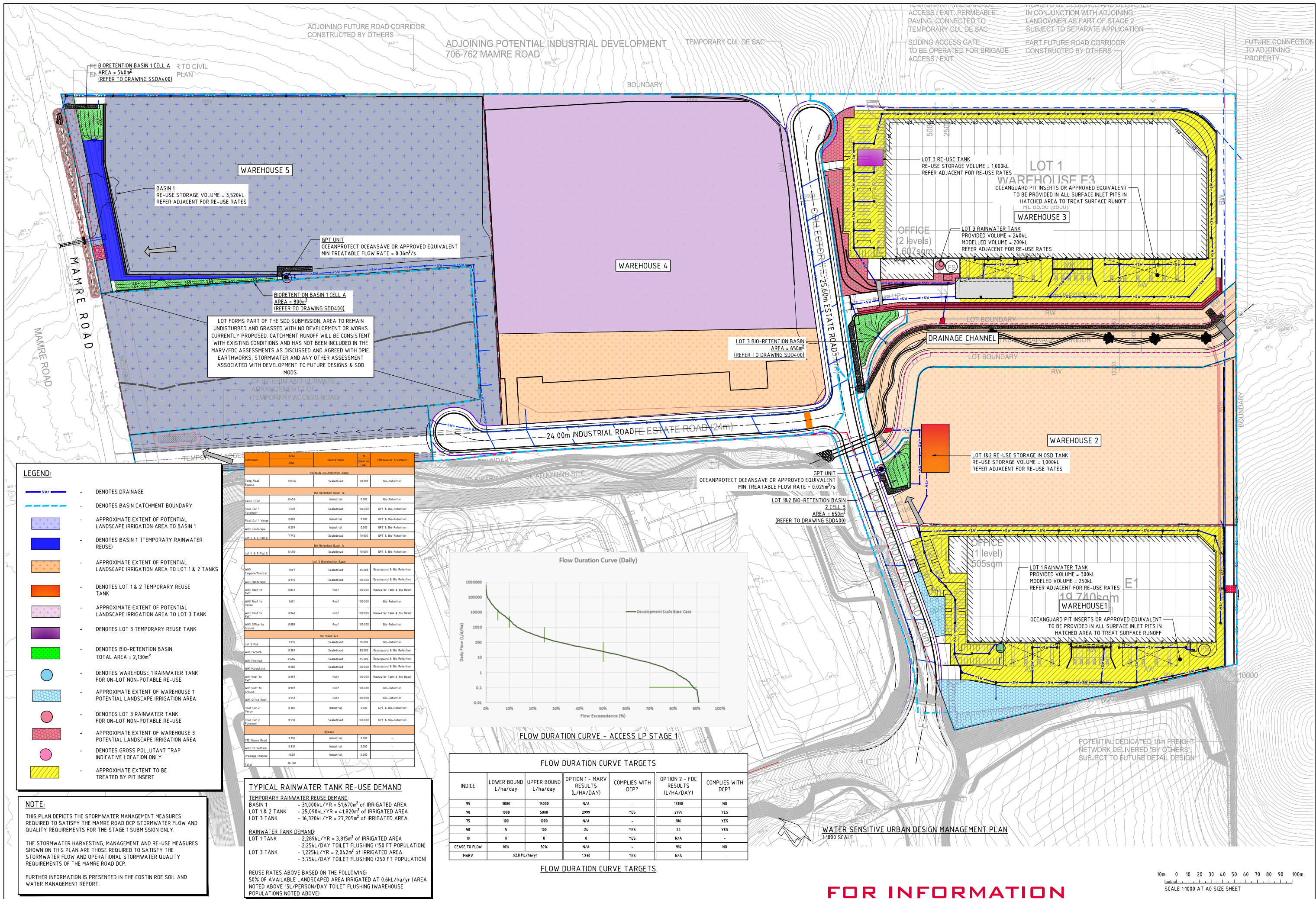
PRE-DEVELOPMENT CATCHMENT PLAN
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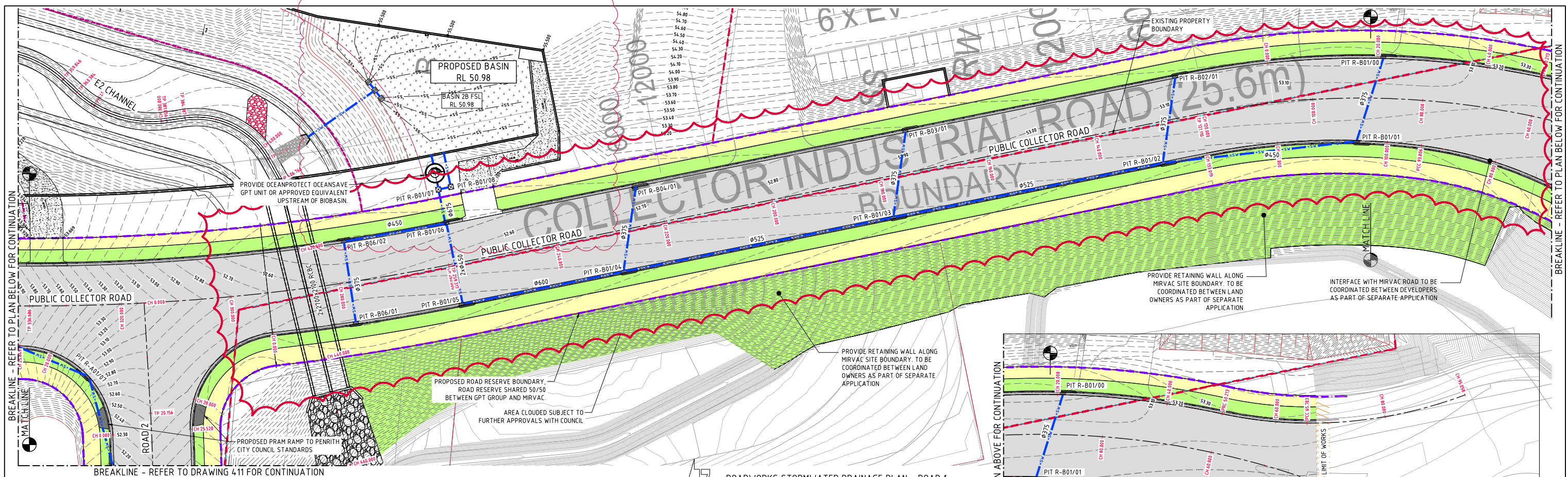
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ARCHITECT		CLIENT		PROJECT		CONSULT		DRAWING TITLE	
SB ARCHITECTS		gpt		YIRIBANA LOGISTICS ESTATE		COSTIN ROE CONSULTING		PRE-DEVELOPMENT STORMWATER CATCHMENT PLAN	
754-770 & 784-786 MAMRE ROAD		KEMPS CREEK NSW		PO Box N419 Sydney NSW 1220		Level 4 & 8 Woodhill Street, Millers Point NSW 2000		DRAWING No	
DESIGNED DS		DRAWN NZ		DATE NOV 23		CHECKED DS		SIZE A0	
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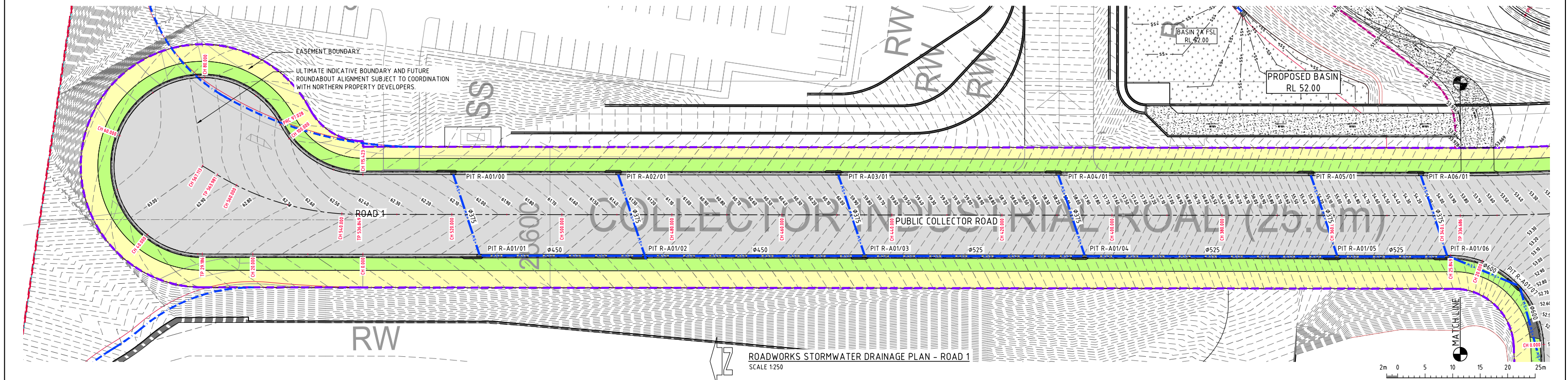


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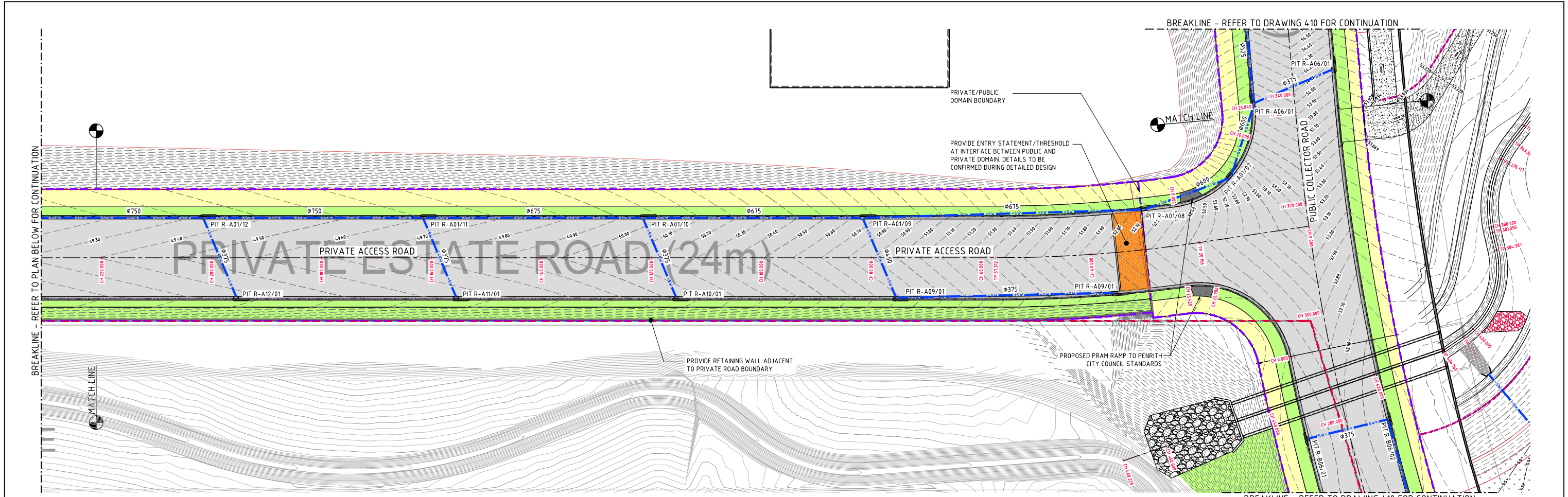
EXISTING SITE LEVELS AND DETAILS BASED ON A PLAN OF SURVEY
2019 DE-01 BY STATIKER 26/09/20.

— 50.00 —	FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS	— S.W. —	INFRASTRUCTURE DRAINAGE
— 50.10 —	FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS	— S.W. —	FUTURE SITE DRAINAGE
— 50.10 —	EXISTING ESTATE CONTOUR	— S.W. —	KIP, KERB INLET PIT
		— S.W. —	SGGP, SINGLE GRATED GULLY PIT
		— S.W. —	SJP, SEALED JUNCTION PIT

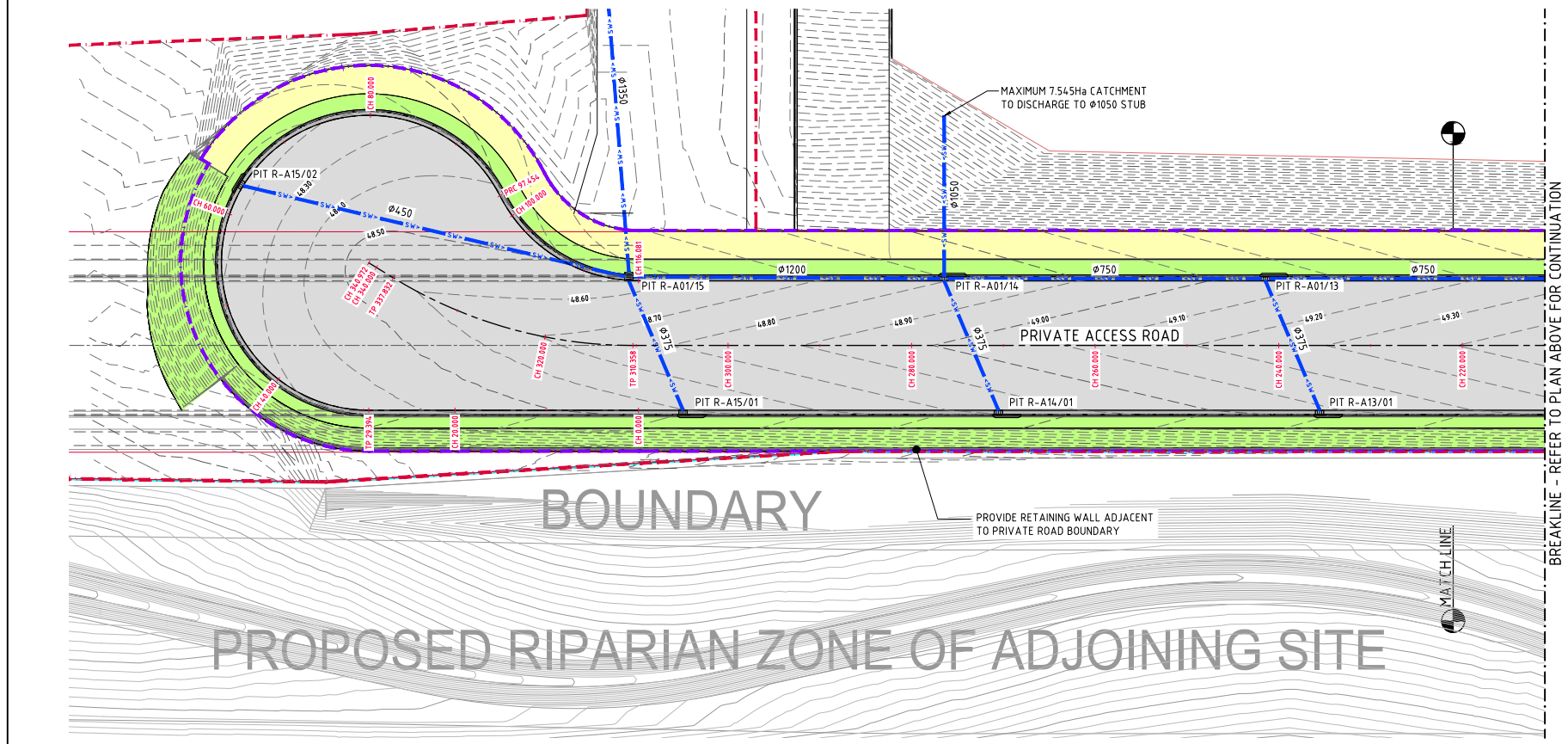
ROAD GEOMETRY NOTE:
THIS PLAN IS PROVIDED TO DEPICT ROAD DRAINAGE PROVISIONS WITHIN THE ROAD CORRIDOR. FINAL ROAD COORDINATION AND ALIGNMENT TO BE ASSESSED UNDER A SEPARATE APPROVALS APPLICATION IN CONJUNCTION WITH BOTH MIRVAC AND GPT



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AMENDMENTS				DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE
PROJECT				YIRIBANA LOGISTICS ESTATE				754-770 & 784-786 MAMRE ROAD			
CLIENT				KEMPS CREEK NSW				COSTIN ROE CONSULTING PTY LTD.			
ARCHITECT				SBA ARCHITECTS				CIVIL & STRUCTURAL ENGINEERS			
DRAWING TITLE				ROADWORKS STORMWATER DRAINAGE PLAN - SHEET 1				DRAWING NO. C013874.06-SDD410			
DESIGNED				DATE	NOV 23	CHECKED	DATE	SCALE	AS SHOWN	CAD REF.	C013874.06-SDD410
FOR INFORMATION				SCALE 1:250 AT A0 SIZE SHEET				SCALE 1:250 AT A0 SIZE SHEET			



ROADWORKS STORMWATER DRAINAGE PLAN - ROAD 2
SCALE 1:250

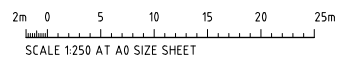


ROADWORKS STORMWATER DRAINAGE PLAN - ROAD 2
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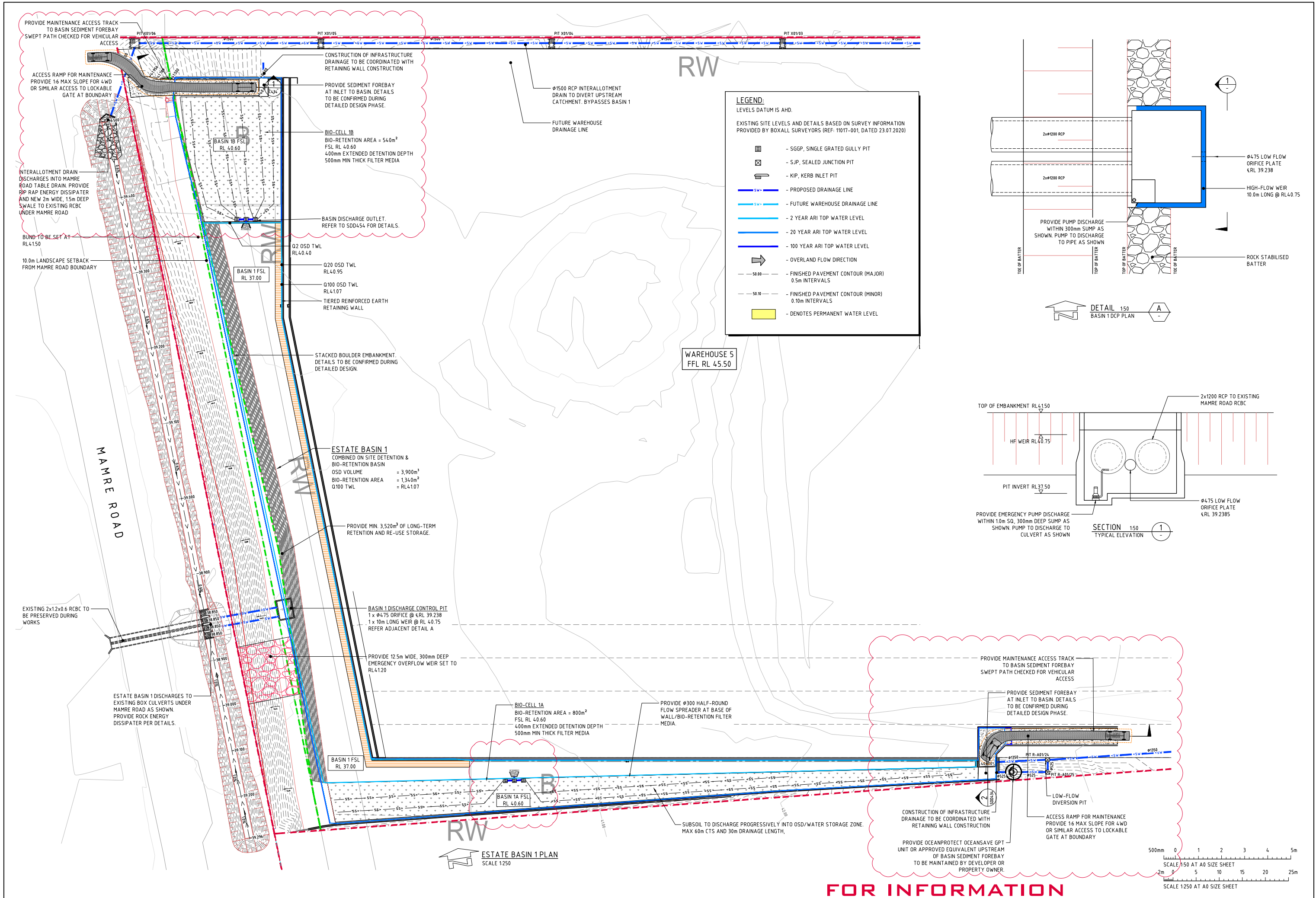
EXISTING SITE LEVELS AND DETAILS BASED ON A PLAN OF SURVEY 20119 DE-01 BY STATIKER 26/09/20.

- 50.00 — - FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- 50.10 — - FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
- 50.10 — - EXISTING ESTATE CONTOUR
- SW+ — - INFRASTRUCTURE DRAINAGE
- SW+ — - FUTURE SITE DRAINAGE
- KIP — - KIP, KERB INLET PIT
- SGGP — - SGGP, SINGLE GRATED GULLY PIT
- SJP — - SJP, SEALED JUNCTION PIT

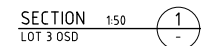
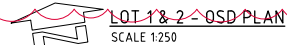


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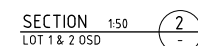
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754-770 & 784-786 MAMRE ROAD				KEMPS CREEK NSW				DRAWN			
CONSULT				CONSULT AUSTRALIA				CHECKED			
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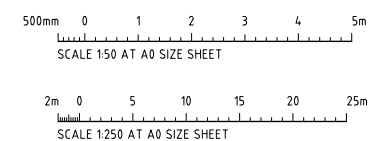
																													
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AMENDMENTS			DATE			ISSUE			AMENDMENTS			DATE			ISSUE			AMENDMENTS			DATE			ISSUE			AMENDMENTS		



ORIFICE PLATE DETAIL
SCALE 1:20

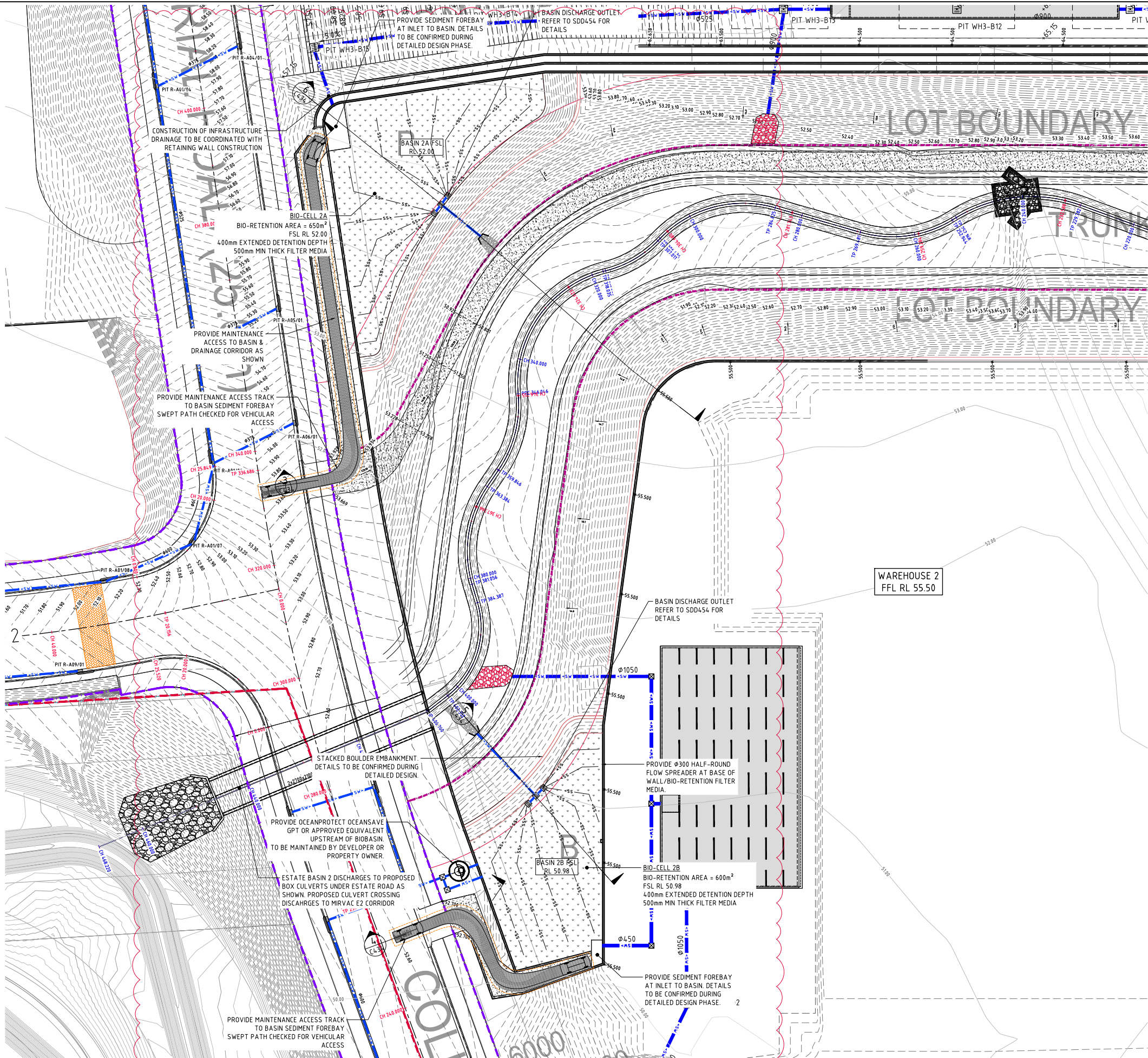


- LEGEND:**
- LEVELS DATUM IS AHD.
- EXISTING SITE BOXALLS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY SOVALL SURVEYORS (REF: 1107-001, DATED 23.07.2020)
- | | |
|---|--|
|  | - SGGP, SINGLE GRATED GULLY PIT |
|  | - S.JP, SEALED JUNCTION PIT |
|  | - KIP, KERB INLET PIT |
|  | - PROPOSED DRAINAGE LINE |
|  | - FUTURE WAREHOUSE DRAINAGE LINE |
|  | - LONG-TERM STORAGE TOP WATER LEVEL |
|  | - 2 YEAR ARI TOP WATER LEVEL |
|  | - 20 YEAR ARI TOP WATER LEVEL |
|  | - 100 YEAR ARI TOP WATER LEVEL |
|  | - OVERLAND FLOW DIRECTION |
|  | - FINISHED PAVEMENT CONTOUR (MAJOR)
0.5m INTERVALS |
|  | - FINISHED PAVEMENT CONTOUR (MINOR)
0.10m INTERVALS |



FOR INFORMATION

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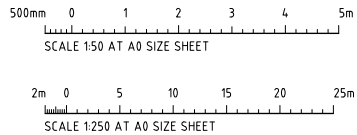


LEGEND:
LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY BOXALL SURVEYORS (REF: 11017-001, DATED 23.07.2020)

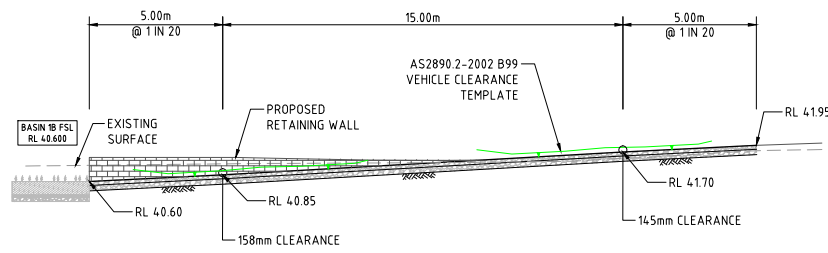
- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- PROPOSED DRAINAGE LINE
- FUTURE WAREHOUSE DRAINAGE LINE
- LONG-TERM STORAGE TOP WATER LEVEL
- 2 YEAR ARI TOP WATER LEVEL
- 20 YEAR ARI TOP WATER LEVEL
- 100 YEAR ARI TOP WATER LEVEL
- SUBSOIL LINE
- OVERLAND FLOW DIRECTION
- FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- FINISHED PAVEMENT CONTOUR (MINOR) 0.10m INTERVALS

ESTATE BASIN 2 PLAN
SCALE 1:250

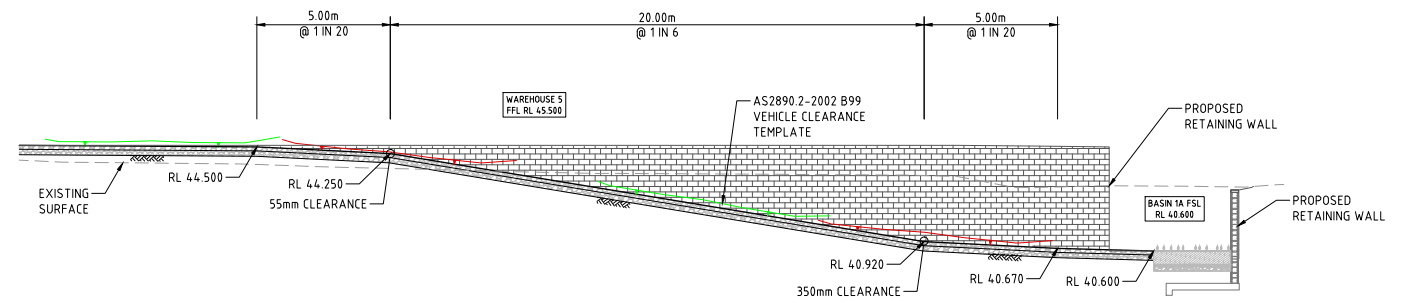


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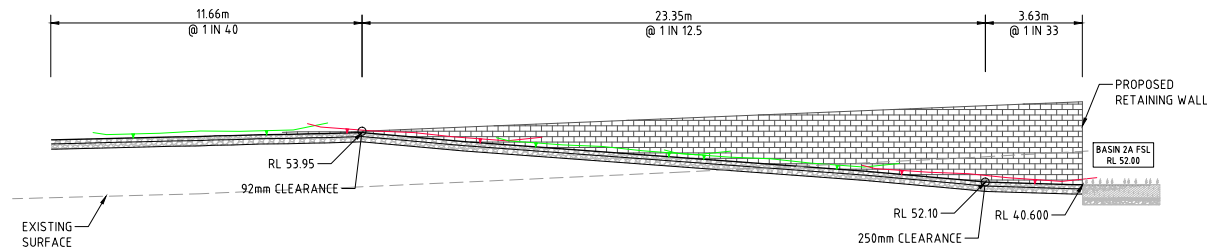
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ISSUED FOR INFORMATION 22.01.24 B				SB ARCHITECTS				gpt				YIRIBANA LOGISTICS ESTATE 754-770 & 784-786 MAMRE ROAD KEMPS CREEK NSW				PO Box N419 Sydney NSW 1220 Level 4 & 8 Woodhill Street, Millers Point NSW 2000 p: +61 2 9251 7699 e: mail@costinroe.com.au				ESTATE BASIN 2 PLAN			
ISSUED FOR INFORMATION 08.12.23 A				SOUTH EAST ARCHITECTS				DESIGNED				DRAWN				E: +61 2 9241 3731 W: costinroe.com.au				DRAWING No			
AMENDMENTS				DATE				ISSUE				NOV 23				C013874.06-SDD433				C			



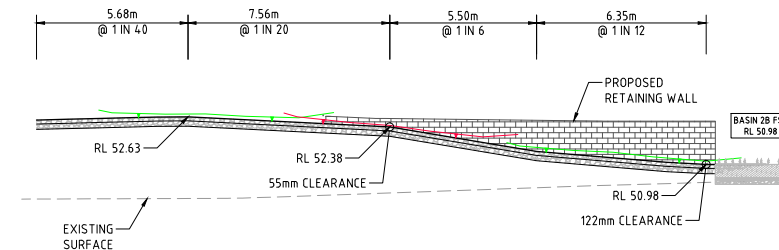
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SDD431



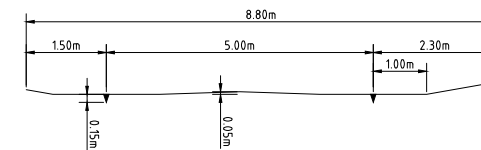
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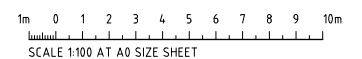
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SDD431



SECTION 4:100
4
SDD431

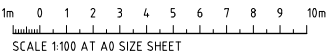
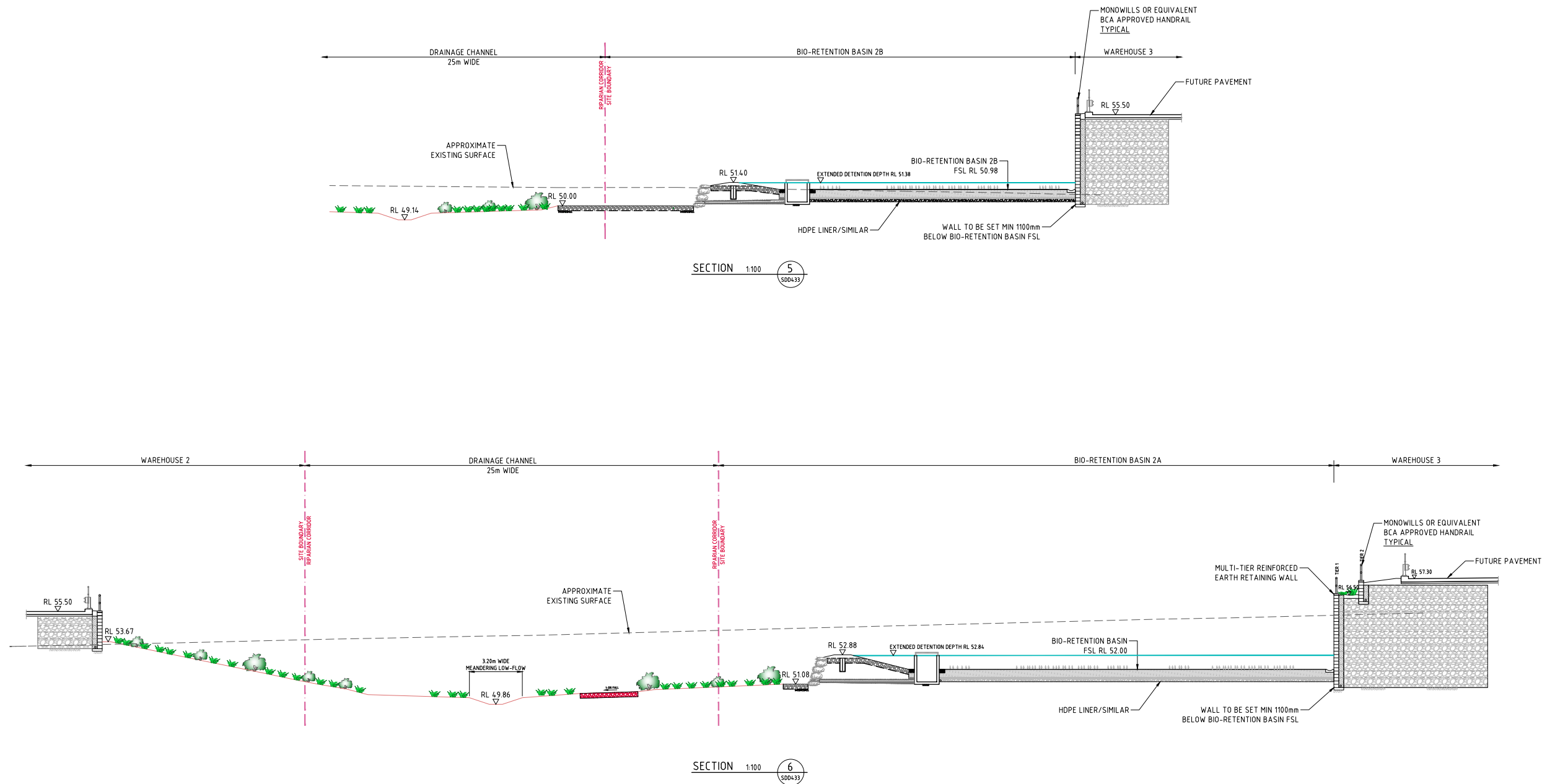


8.8m VEHICLE GROUND CLEARANCE DETAIL



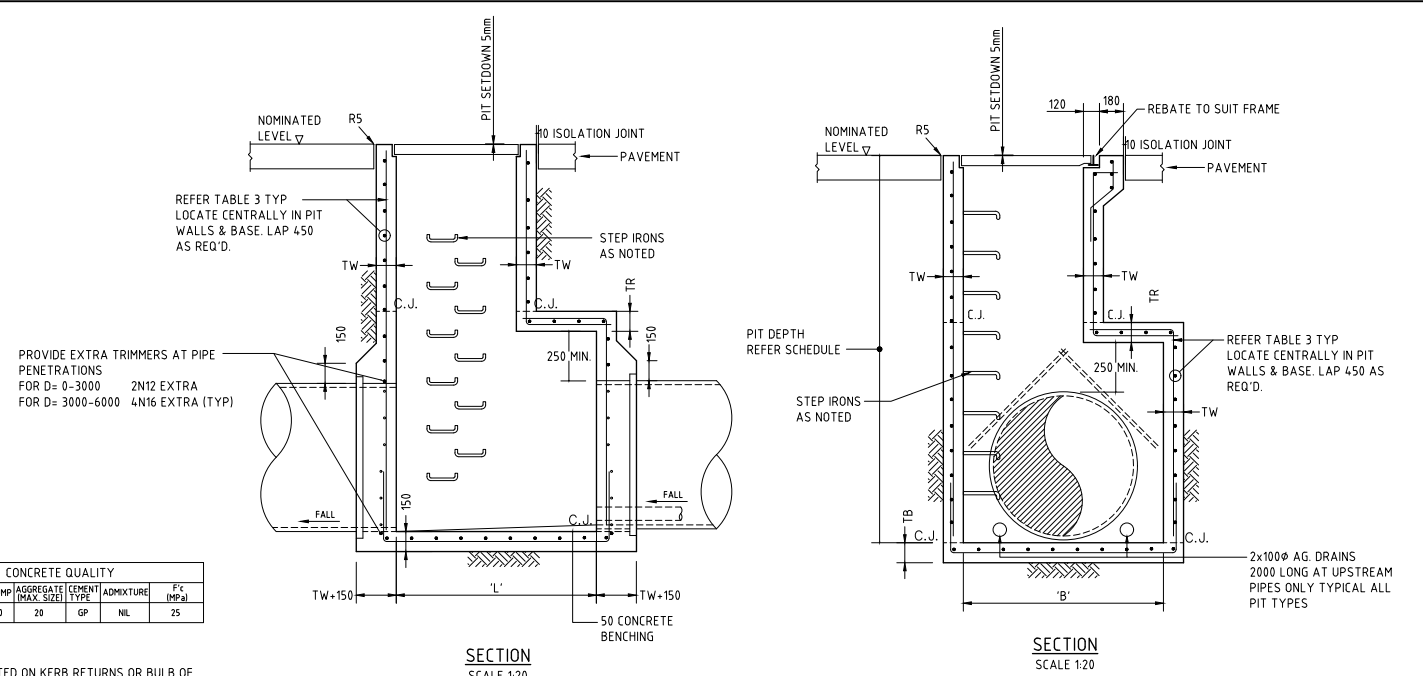
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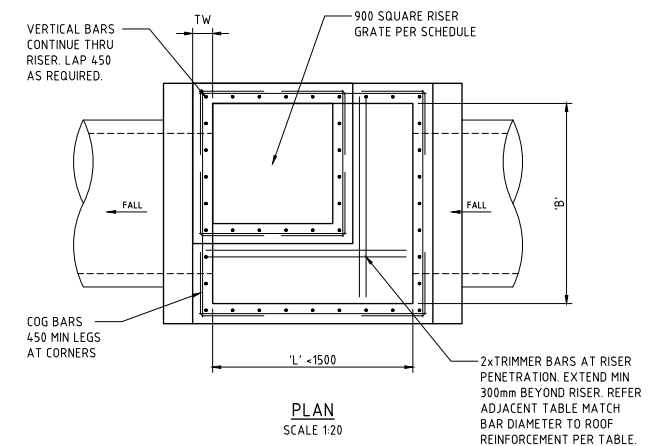
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ISSUED FOR INFORMATION				27.02.24				C				PROJECT				YIRIBANA LOGISTICS ESTATE				PO Box N419 Sydney NSW 1220				DRAWING TITLE				ESTATE BASIN SECTIONS							
ISSUED FOR INFORMATION				22.01.24				B				754-770 & 784-786 MAMRE ROAD				KEMPS CREEK NSW				Level 4, 8 Woodhill Street, Millers Point NSW 2000				SHEET 2											
ISSUED FOR INFORMATION				08.12.23				A				CONSULT AUSTRALIA				COSTIN ROE CONSULTING				CIVIL & STRUCTURAL ENGINEERS				DRAWING NO				C013874-06-DD435							
AMENDMENTS				DATE				ISSUE				AMENDMENTS				DATE				ISSUE				AMENDMENTS				DATE				ISSUE			



- NOTES:**
1. WHERE GULLY PIT IS LOCATED ON KERB RETURNS OR BULB OF CUL-DE-SACS PROVIDE CURVED PRECAST CONCRETE LINTELS.
 2. SAG PITS SHALL HAVE LINTEL PLACED CENTRALLY ABOUT THE GRATE.
 3. ALL REINFORCING TO HAVE 30 MIN. CLEAR CONCRETE COVER.
 4. FOR PITS DEEPER THAN 1200mm STEP IRONS SHALL BE PROVIDED.
 5. FOR ALL PITS IN ITV PAVEMENT AREAS, PIT WALLS ARE TO BE INCREASED IN THICKNESS BY 50mm AND REINFORCEMENT TO BE N16 BARS IN LIEU OF N12

DEPTH 'H'	WALL THICKNESS 'TW'	WALL REINFORCEMENT	ROOF THICKNESS 'TR'	ROOF REINFORCEMENT	BASE THICKNESS 'TB'	BASE REINFORCEMENT
<15m	150mm	N12-200 EACH WAY	150mm	N12-200 EACH WAY	150mm	N12-200 EACH WAY
15m-30m	150mm	N12-200 EACH WAY	150mm	N12-200 EACH WAY	150mm	N12-200 EACH WAY
30m-4.5m	200mm	N16-200 EACH WAY	200mm	N16-200 EACH WAY	200mm	N12-200 EACH WAY
4.5-6.0	250mm	N16-200 EACH WAY	250mm	N16-200 EACH WAY	250mm	N16-200 EACH WAY

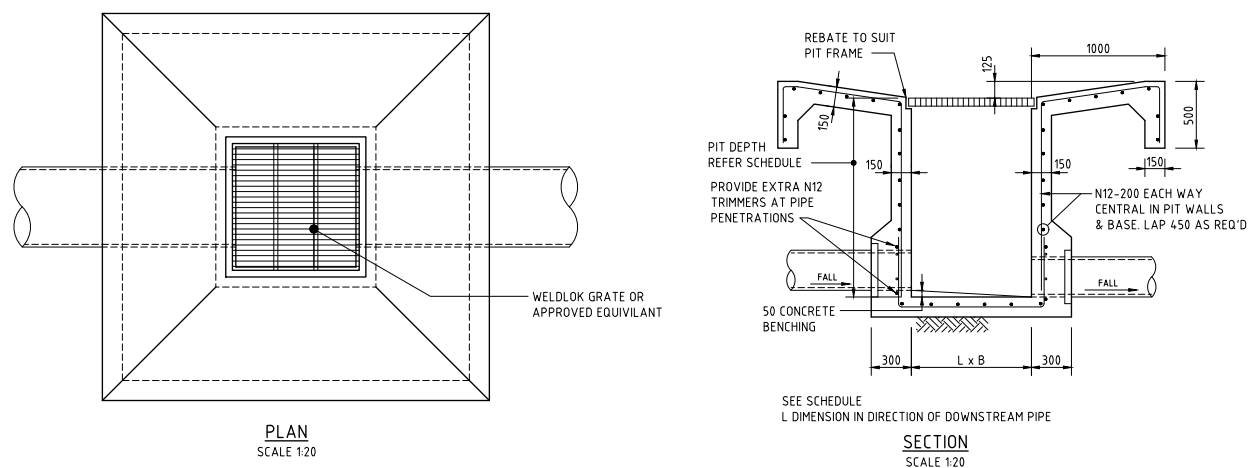


TAPERED SINGLE GRATED GULLY PIT - SGGP

SUBSOIL NOT SHOWN
FOR CLARITY.

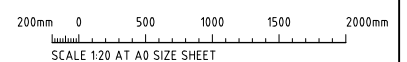
TAPERED KERB INLET PIT - KIP

SUBSOIL NOT SHOWN
FOR CLARITY.



FIELD INLET PIT - SIP

FOR INFORMATION



BIO-RETENTION NOTES :

FILTER MEDIA TO BE LOAMY SAND WITH A PERMEABILITY NOT LESS THAN 200mm/hr. FILTER MEDIA TO BE FREE OF RUBBISH, DELETERIOUS MATERIAL, TOXICANTS, DECLARED PLANTS AND LOCAL WEEDS, AND IS TO NOT BE HYDROPHOBIC.

FILTER MEDIA TO HAVE THE FOLLOWING COMPOSITION RANGE:

CLAY & SILT (<0.05mm)	<3%
VERY FINE SAND (0.05-0.15mm)	5-30%
FINE SAND (0.15-0.25mm)	10-30%
MEDIUM TO COARSE SAND (0.25-1.00mm)	40-60%
COARSE SAND (1.0-2.0mm)	7-10%
FINE GRAVEL (2.0-3.4mm)	<3%

FILTER MEDIA THAT DOES NOT MEET THE FOLLOWING CRITERIA SHALL BE REJECTED:

- ORGANIC MATTER CONTENT TO BE IDEALLY WITHIN 1% TO 3% (W/W) AND TO BE NO GREATER THAN 5%(W/W).
- PH TO BE BETWEEN 5.5 AND 7.5
- PHOSPHOROUS CONTENT TO BE NO GREATER THAN 35mg/kg

FILTER MEDIA TO BE ASSESSED BY QUALIFIED HORTICULTURALIST TO ENSURE CAPABILITY OF SUPPORTING PLANT LIFE.

DRAINAGE LAYER TO BE CLEAN GRAVEL 5-7mm.

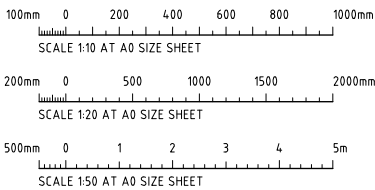
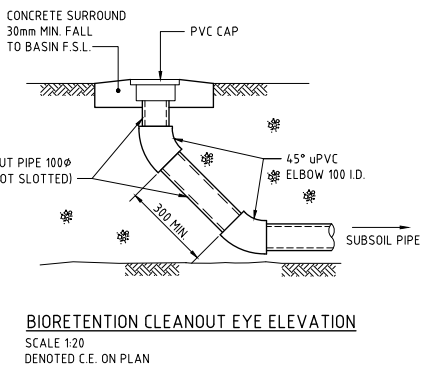
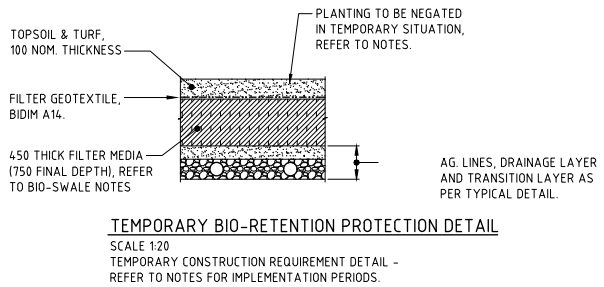
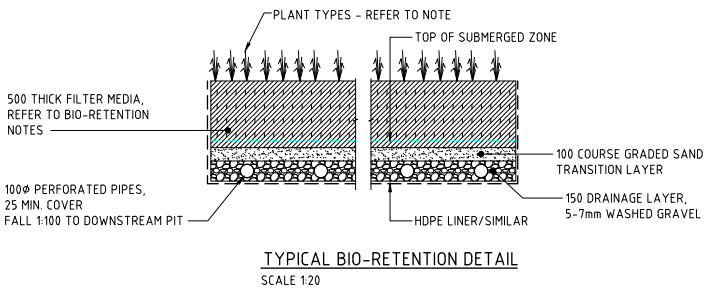
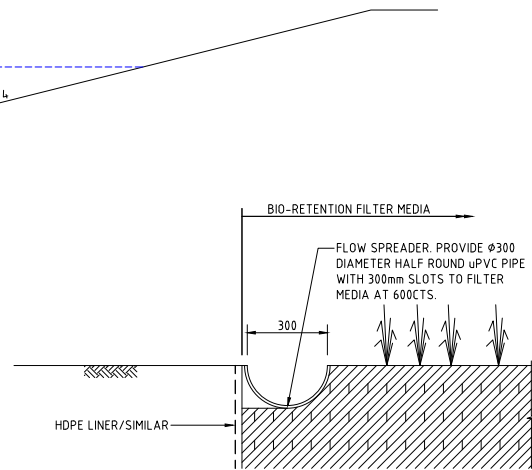
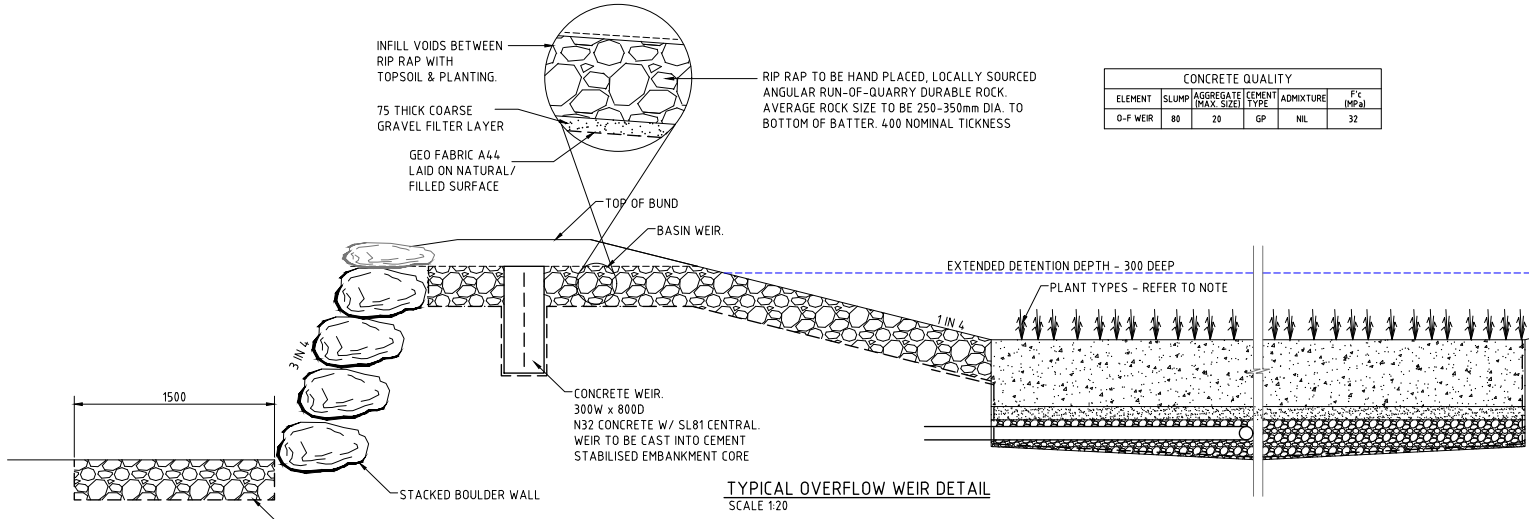
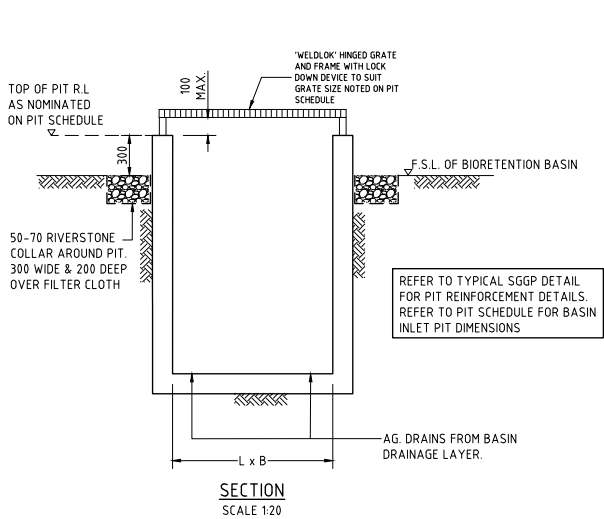
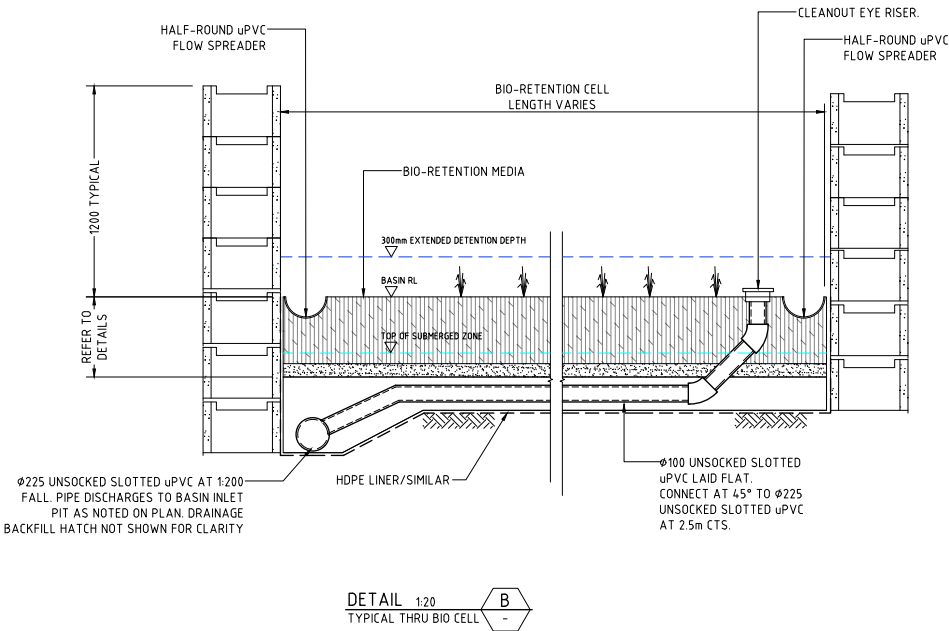
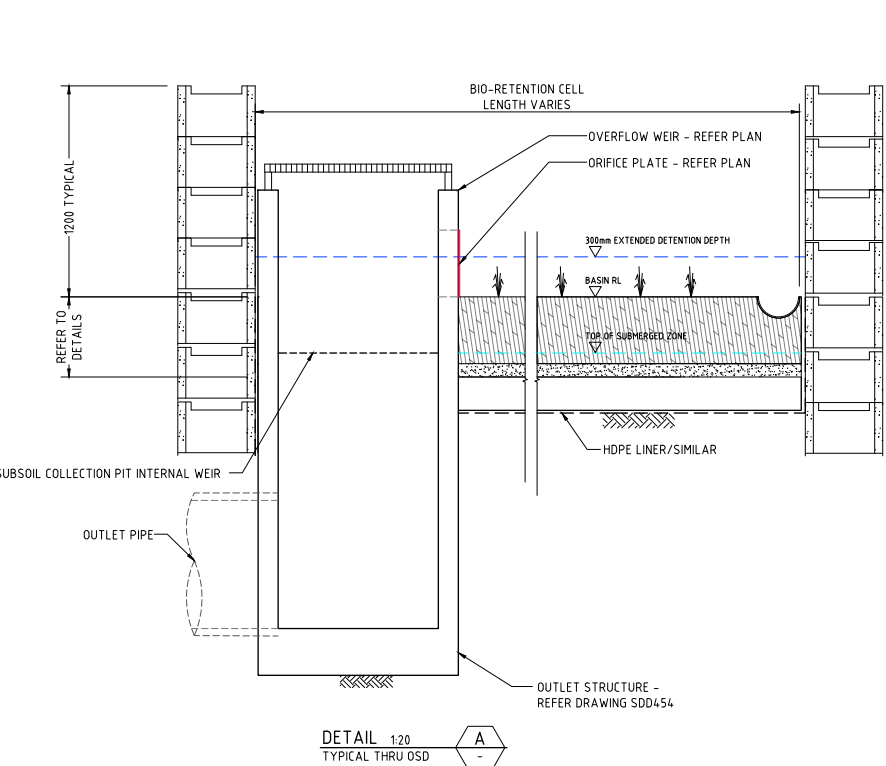
PLANTS TO BE IN ACCORDANCE WITH PENRITH CITY COUNCIL REQUIREMENTS.

PROVIDE 100mm TOPSOIL AND TEMPORARY EROSION PROTECTION (JUTEMASTER OR EQUIV) TO SWALE BATTER SLOPES AND ADJACENT LANDSCAPED AREAS. NOTE THAT NO TOPSOIL IS TO BE PLACED OVER FILTRATION MEDIA. PROVIDE SILT FENCE TO TOP OF BANK UNTIL SUCH TIME AS THIS STABILISING AND VEGETATION HAS BEEN COMPLETED.

BIO-RETENTION TO BE PARTIALLY INSTALLED, FOLLOWING COMPLETION OF ROADWORKS, WITH THE TOP 75-100mm OF FILTER MEDIA REPLACED WITH A FINE TO COARSE SAND UNDERLAIN WITH A GEOTEXTILE LAYER (REFER TO DETAIL). FOLLOWING COMPLETION OF THE UPSTREAM DEVELOPMENT AND SITE STABILISATION, THE SAND IS TO BE REMOVED, REPLACED WITH FILTER MATERIAL AND PLANTED OUT. REFER TO TEMPORARY BIO-BASIN DETAIL

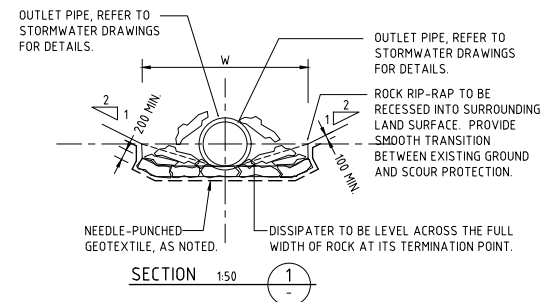
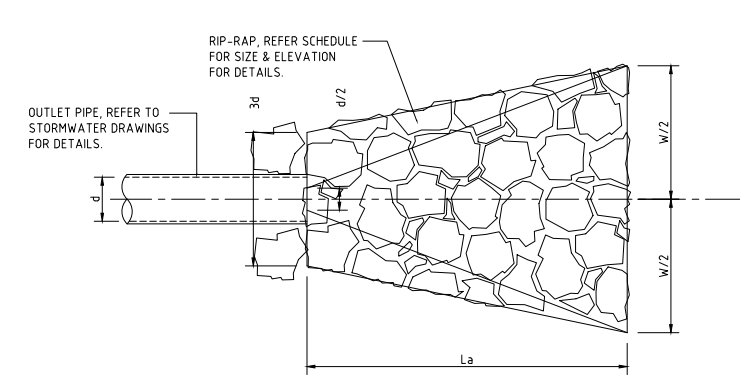
PRIOR TO PLANTING, THE TOP 100mm OF THE BIORETENTION FILTER MEDIA IS TO BE AMELIORATED WITH APPROPRIATE ORGANIC MATTER, FERTILISER AND TRACE ELEMENTS TO AID PLANT ESTABLISHMENT AS PER THE TABLE BELOW:

TABLE: RECIPE FOR AMELIORATING TOP 100mm OF BIORETENTION FILTER MEDIA		
CONSTITUENT	QUANTITY (kg/m ² OF FILTER AREA)	
GRANULATED PASTURE MANURE FINES	20	
SUPERPHOSPHATE	2	
MAGNESIUM SULPHATE	3	
POTASSIUM SULPHATE	2	
TRACE ELEMENT MIX	1	
FERTILISER WPX (16.4.14)	4	
LIME	20	



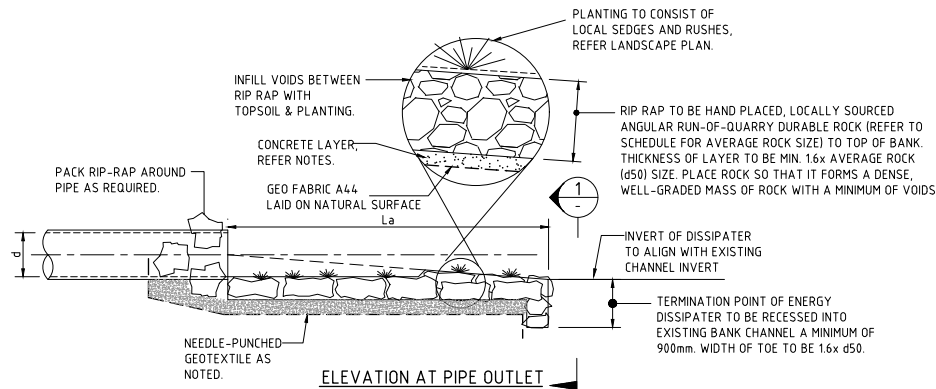
FOR INFORMATION

ARCHITECT				CLIENT				PROJECT				CONSULT				DRAWING TITLE			
SB ARCHITECTS				gpt				YIRIBANA LOGISTICS ESTATE 754-770 & 784-786 MAMRE ROAD KEMPS CREEK NSW				Costin Roe Consulting Pty Ltd. ABN 50 003 696 446				STORMWATER DRAINAGE DETAILS SHEET 3			
SHEET 3 OF 3				DESIGNED: DS				DRAWN: NZ				CHECKED: DS				SCALE: AS SHOWN			
DATE: 27.02.24				DATE: 27.02.24				DATE: 27.02.24				DATE: 27.02.24				DATE: 27.02.24			
ISSUE: C				ISSUE: B				ISSUE: A				ISSUE: B				ISSUE: A			
AMENDMENTS				AMENDMENTS				AMENDMENTS				AMENDMENTS				AMENDMENTS			



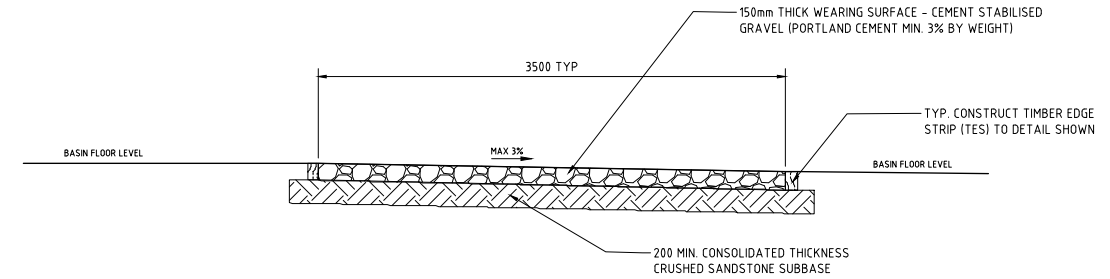
DISSIPATER NOTES:

- PIPE TO REST ON, AND BE PACKED IN, BY RIP-RAP (SIZE AS NOTED).
- DISCHARGE INTO STREAM WHERE BEDROCK IS PRESENT, OTHERWISE SCOUR PROTECT AS REQUIRED.
- SCOUR PROTECT THE OPPOSITE BANK AS REQUIRED. SCOUR PROTECTION TO BE PROVIDED WHERE OPPOSITE BANK IS WITHIN 12-14 TIMES THE PIPE DIAMETER.
- RIP-RAP TO CONSIST OF ANGULAR RUN-OF-QUARRY ROCK (d50= 150mm MINIMUM) AS NOTED IN THE SCHEDULE. RIP-RAP TO BE MINIMUM THICKNESS OF RIP-RAP LAYER TO BE 1.6x AVERAGE ROCK SIZE (d50).
- RIP-RAP IS TO BE PLACED OVER A 200mm LAYER OF MASS CONCRETE OVER NEEDLE-PUNCHED GEOFAB A44.
- PLACE ROCK SO THAT IT FORMS A DENSE, WELL-GRADED MASS OF ROCK WITH A MINIMUM OF VOIDS. THE FINISHED RIP-RAP SURFACE SHOULD BE FREE OF POCKETS OF SMALL ROCK OR CLUSTERS OF LARGE ROCKS.
- GAPS IN RIP-RAP TO BE HAND PACKED WITH TOPSOIL & PLANTED WITH NATIVE SEDGES & RUSHES TO PROVIDE. THE INTENT IS FOR THERE TO BE NO VOIDS BETWEEN RIP-RAP BOULDERS.
- ENSURE THE FINISHED ROCK SURFACE BLENDS WITH THE SURROUNDING GROUND LEVELS. NO OVERFALL OR PROTRUSION OF ROCK SHOULD BE APPARENT.
- ENSURE THAT STORMWATER FROM SURROUNDING GROUND IS FREE TO ENTER THE STRUCTURE WITHOUT CAUSING UNDESIRABLE PONDING OR SCOUR.



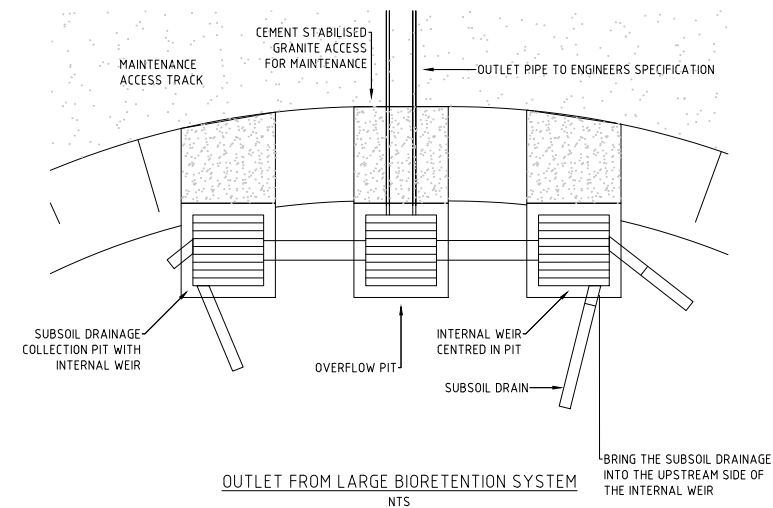
BASIN OUTLET STRUCTURES

SCALE 1:50

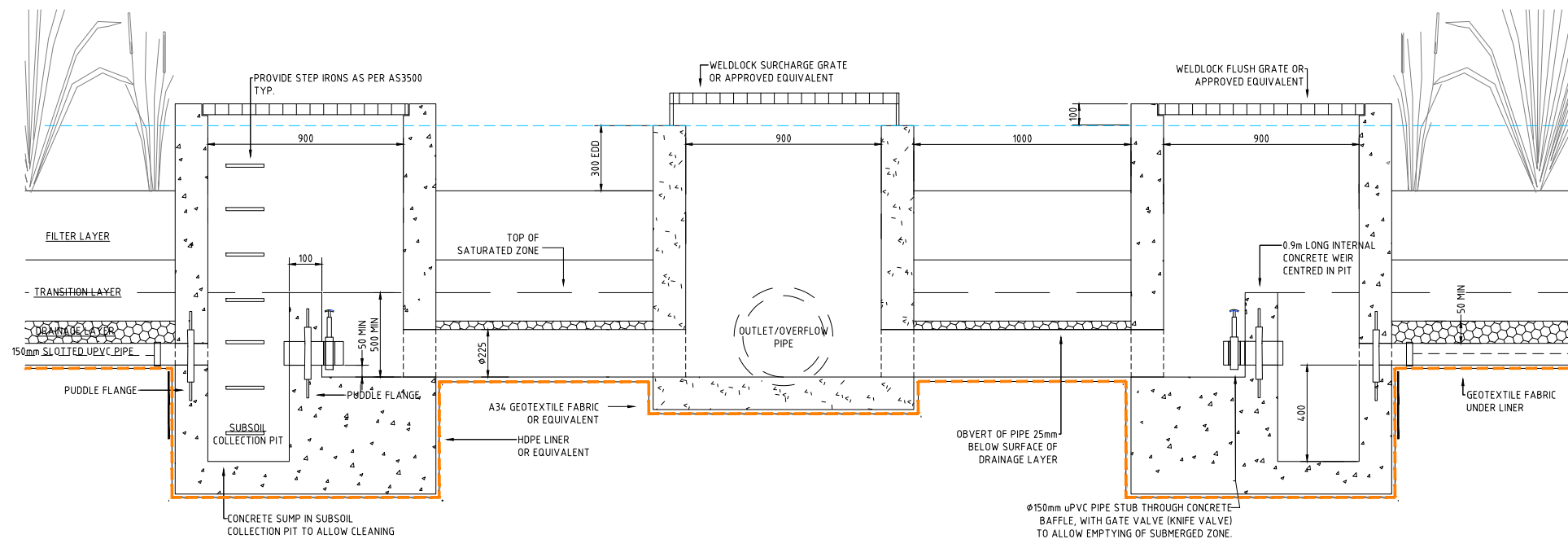


CONSTRUCTION

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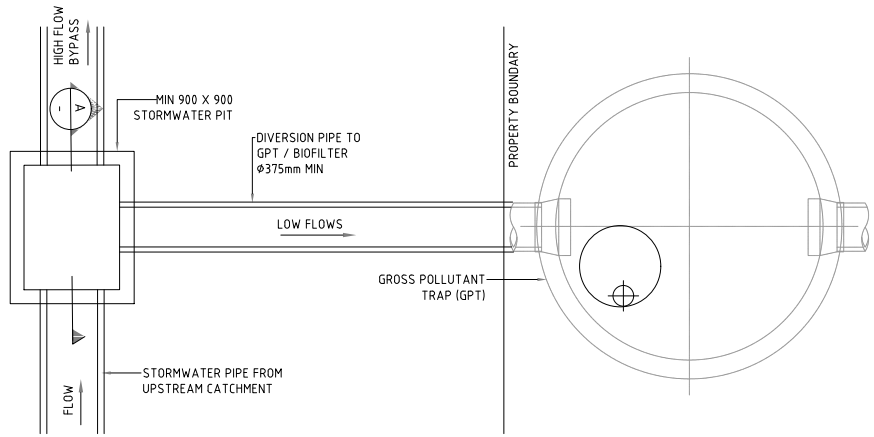


BRING THE SUBSOIL DRAINAGE INTO THE UPSTREAM SIDE OF THE INTERNAL WEIR

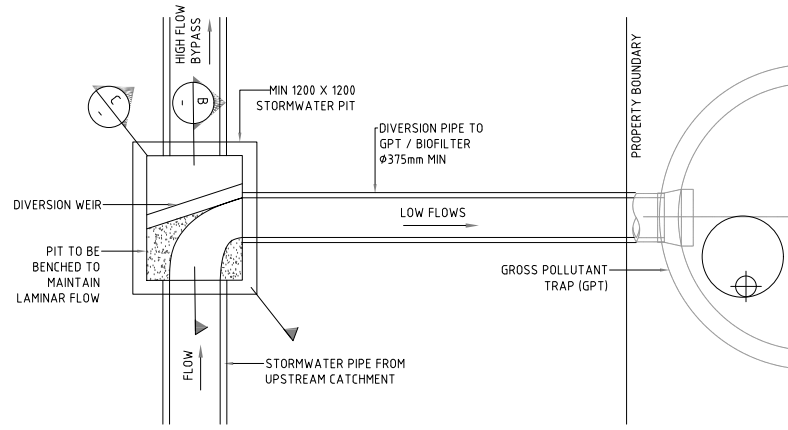


FOR INFORMATION

ISSUED FOR INFORMATION 27.02.24 C ISSUED FOR INFORMATION 08.12.23 B ISSUED FOR INFORMATION 05.12.23 A AMENDMENTS				ARCHITECT SB ARCHITECTS CLIENT gpt PROJECT YIRIBANA LOGISTICS ESTATE 754-770 & 784-786 MAMRE ROAD KEMPS CREEK NSW DESIGNED DS DRAWN NZ DATE NOV-23 CHECKED DS SCALE A0 AS SHOWN CAD REF. C013874.06-SDD454				Costin Roe Consulting Pty Ltd. PO Box N419 Sydney NSW 1220 Level 4 & 8 Woodhill Street, Millers Point NSW 2000 p: +61 2 9251 7699 e: mail@costinroe.com.au w: costinroe.com.au CRC COSTIN ROE CONSULTING CIVIL & STRUCTURAL ENGINEERS				DRAWING TITLE STORMWATER DRAINAGE DETAILS SHEET 4 DRAWING No C013874.06-SDD454		1800
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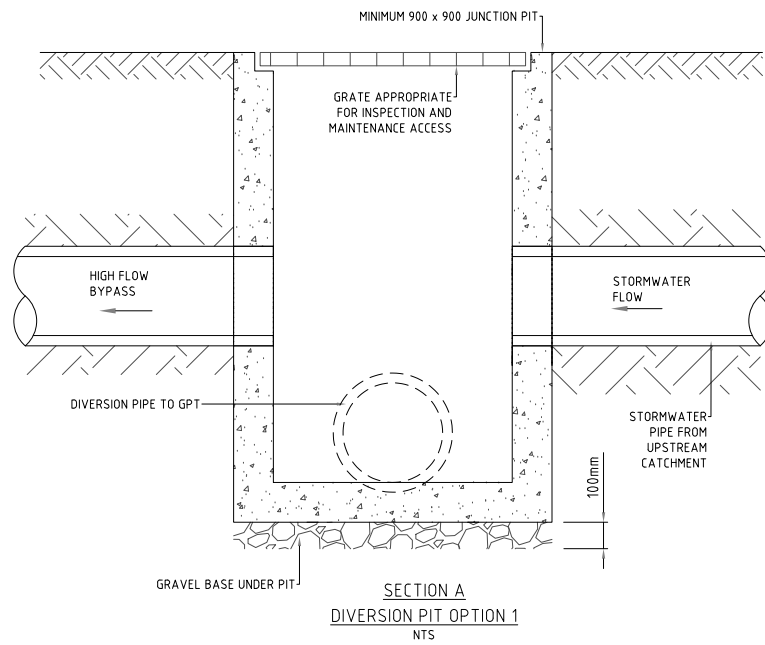
TYPICAL DIVERSION OPTION 1 - SUMP
NTS



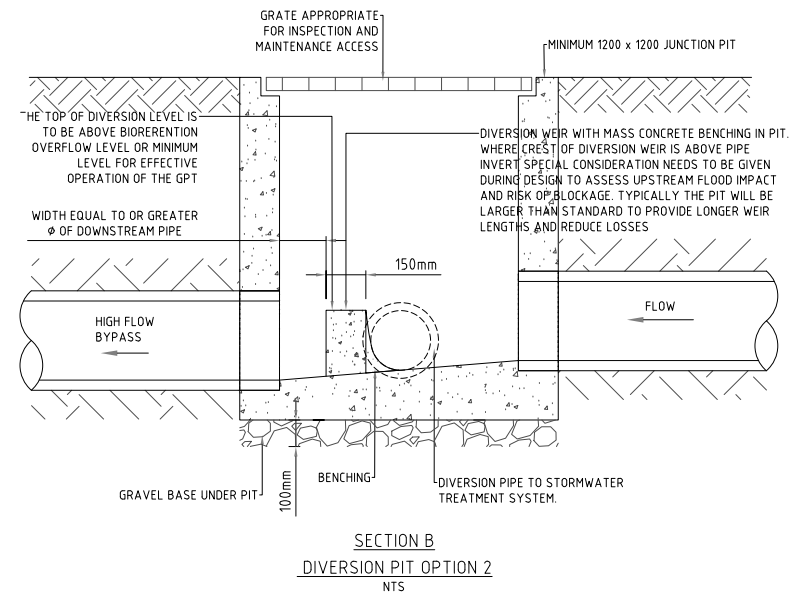
TYPICAL DIVERSION OPTION 2 - WEIR
NTS

DESIGN NOTES

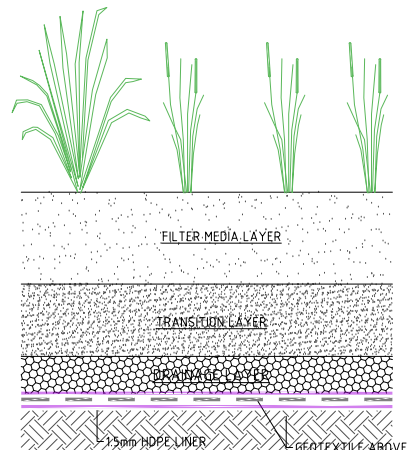
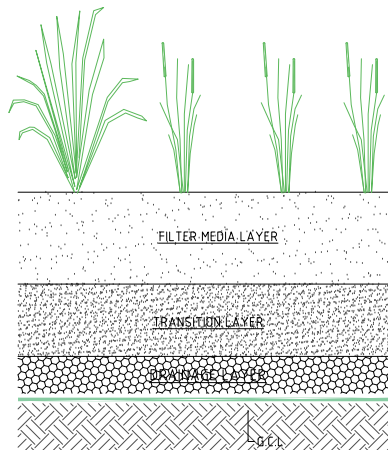
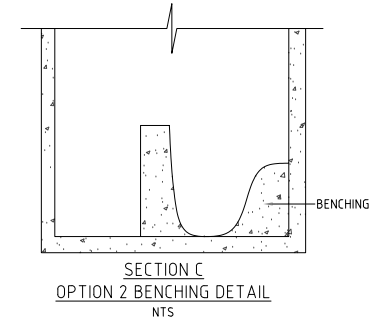
- DIVERSION PITS ARE KEY POINTS WHERE MAINTENANCE IS OFTEN REQUIRED - CONSIDER ACCESS AND MAINTENANCE TECHNIQUES. SUMPS WILL REQUIRE PERIODIC MAINTENANCE TO REMOVE ACCUMULATED MATERIAL.
- WEIRS CAN ALSO BE USED TO DIVERT FLOWS WITHIN STORMWATER PITS, HOWEVER CHECK THE HYDRAULIC GRADE LINE TO AVOID IMPACTS ON HYDRAULIC GRADES UPSTREAM.
- THE MINIMUM SIZE OF DIVERSION PIPE SHALL BE Ø375mm TO REDUCE BLOCKAGE RISK.
- THE GRADE AND LEVEL OF THE DIVERSION PIPE SHALL BE DETERMINED BY HYDRAULIC DESIGN. TYPICALLY SYSTEMS SHOULD BE DESIGNED FOR 6 MONTH PEAK FLOW BEING THE 0.75 x 1 YEAR ARI.
- GPTs SHALL BE DESIGNED TO TREAT 0.75 x 1YR ARI PEAK FLOW & REMOVE 50% ANNUAL TSS LOAD



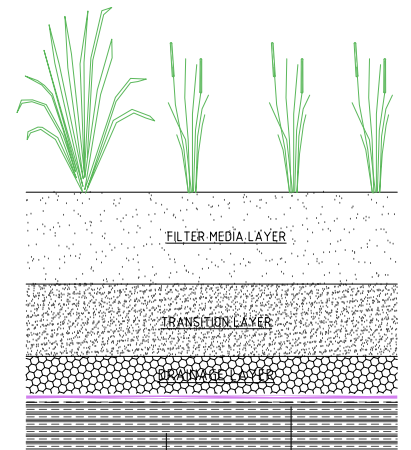
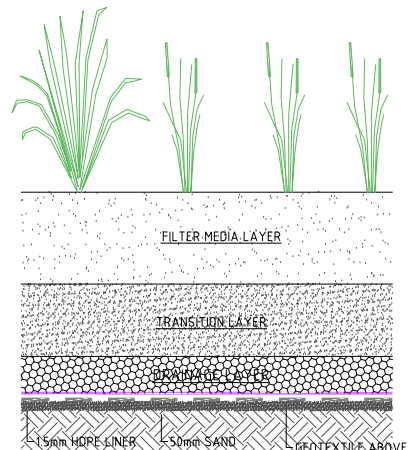
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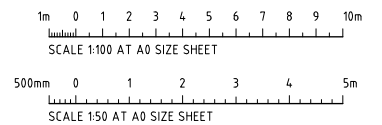
OPTION C



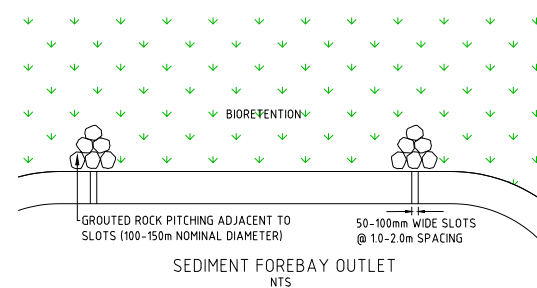
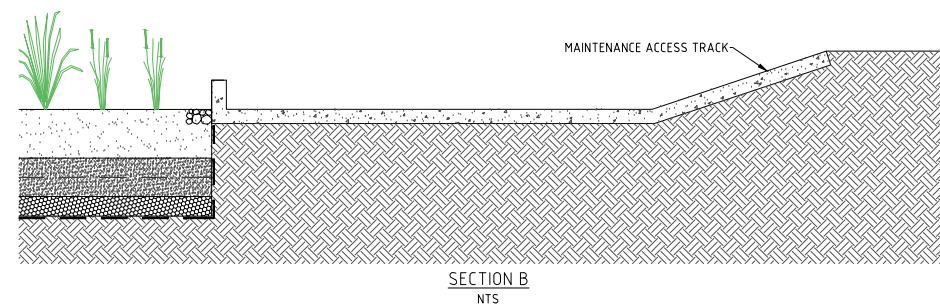
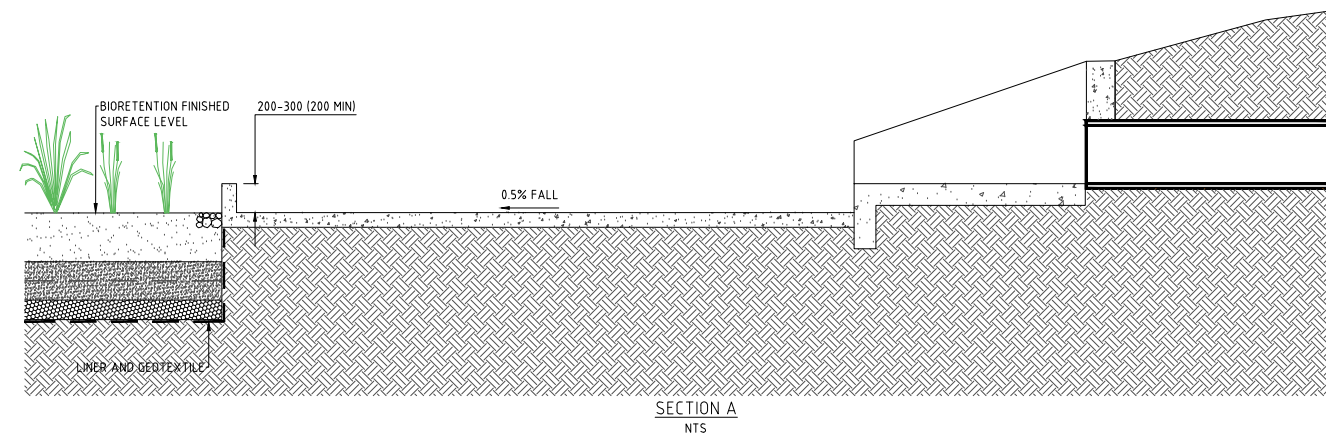
LINER OPTIONS
NTS



FOR INFORMATION



ISSUED FOR INFORMATION27.02.24B ISSUED FOR INFORMATION22.01.24A AMENDMENTS <table><thead><tr><th>DATE</th><th>ISSUE</th><th>AMENDMENTS</th><th>DATE</th><th>ISSUE</th><th>AMENDMENTS</th><th>DATE</th><th>ISSUE</th><th>AMENDMENTS</th><th>DATE</th><th>ISSUE</th></tr></thead><tbody></tbody></table>										DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE	ARCHITECT SBAARCHITECTS Suite 702, 83 Mount Street, North Sydney NSW 2060 02 9550 888802 9550 8880 info@sbarchitects.com.auwww.sbarchitects.com.au CLIENT gpt PROJECT YIRIBANA LOGISTICS ESTATE 754-770 & 784-786 MAMRE ROAD KEMPS CREEK NSW CONSULT AUSTRALIA Costin Roe Consulting Pty Ltd. ALIN 50 003 696 446 PO Box N419 Sydney NSW 1220 Level 4, 8 Windmill Street, Millers Point NSW 2000 p: +61 2 9251 7699 e: mail@costinroe.com.au f: +61 2 9260 3721 w: costinroe.com.au CRC COSTIN ROE CONSULTING CIVIL & STRUCTURAL ENGINEERS DRAWING TITLE STORMWATER DRAINAGE DETAILS SHEET 5 DRAWING NoC013874.06-SDD455 ISSUE B									
DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE																				



NOTES

1. THE SIZE OF THE SEDIMENT FOREBAY IS ESTABLISHED USING THE FOLLOWING: (TAKEN FROM WATER BY DESIGN, 2014, P.71-2)

$$V_s = A_c \times R \times L_0 \times F_c$$

WHERE:

V_s = VOLUME OF FOREBAY SEDIMENT STORAGE REQUIRED (m^3)

A_c = CONTRIBUTING CATCHMENT AREA (ha)

R = CAPTURE EFFICIENCY (ASSUME 80%)

L_0 = SEDIMENT LOADING RATE ($m^3/ha/year$) - ASSUME $1m^3/ha/year$

F_c = DESIRED CLEAN-OUT FREQUENCY (year) - ASSUME 4 CLEAN-OUTS PER YEAR

THE AREA OF THE FOREBAY IS ESTABLISHED BY DIVIDING THE VOLUME BY THE DEPTH. THE DEPTH OF THE FOREBAY SHOULD NOT BE GREATER THAN 0.3M BELOW THE SURFACE OF THE FILTER MEDIA.

$$A_S = V_S / D$$

WHERE:

D = DEPTH OF SEDIMENT FOREBAY (MAX 0.3 M BELOW FILTER MEDIA SURFACE)

THE SEDIMENT FOREBAY AREA SHOULD BE CHECKED TO ENSURE IT CAPTURES THE 1MM AND GREATER PARTICLES USING THE FOLLOWING EXPRESSION (MODIFIED VERSION OF EMB AND GEMER (1981))

USING THE FOLLOWING EXPRESSION (MODIFIED VERSION OF FAIR AND GEYER (1954):

$$R = 1 - [1 + 1/n \cdot V_T/(Q/A)]^{-n}$$

WHERE:

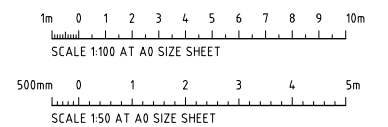
R = FRACTION OF TARGET SEDIMENT REMOVED (80%)

V_T = SETTLING VELOCITY OF TARGET SEDIMENT (100mm/s OR 0.1m/s FOR 1mm PARTICLE)

Q/A = APPLIED FLOW RATE DIVIDED BY BASIN SURFACE AREA ($\text{m}^3/\text{s}/\text{m}^2$)

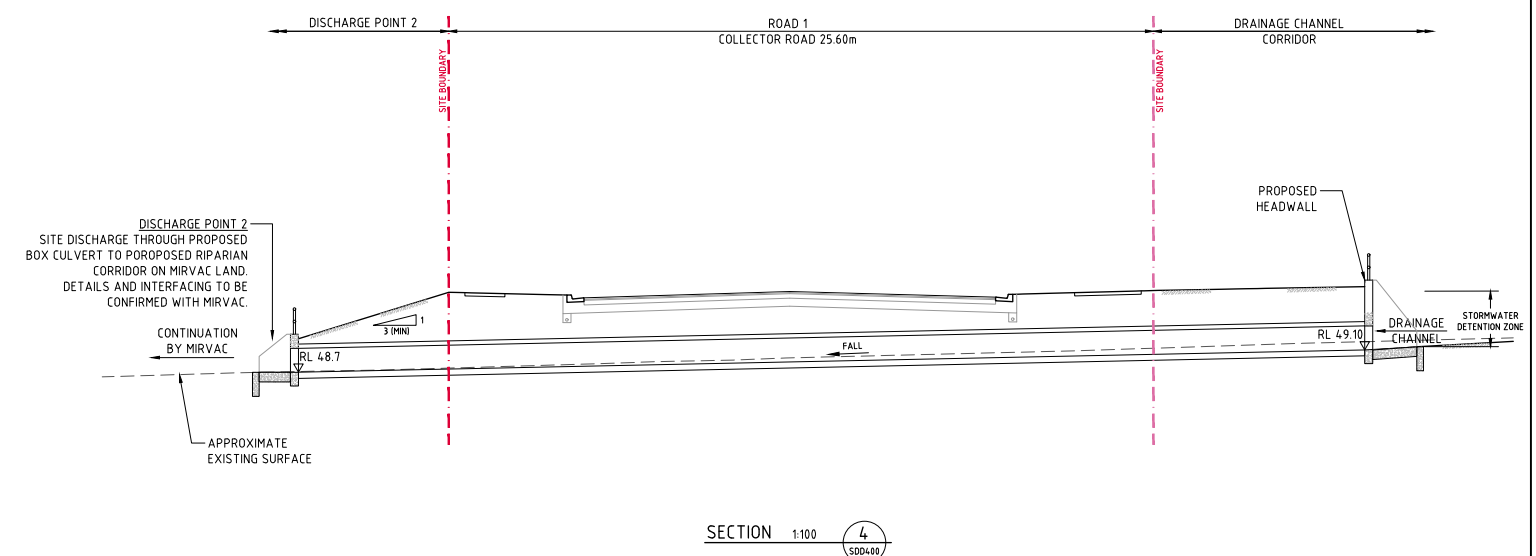
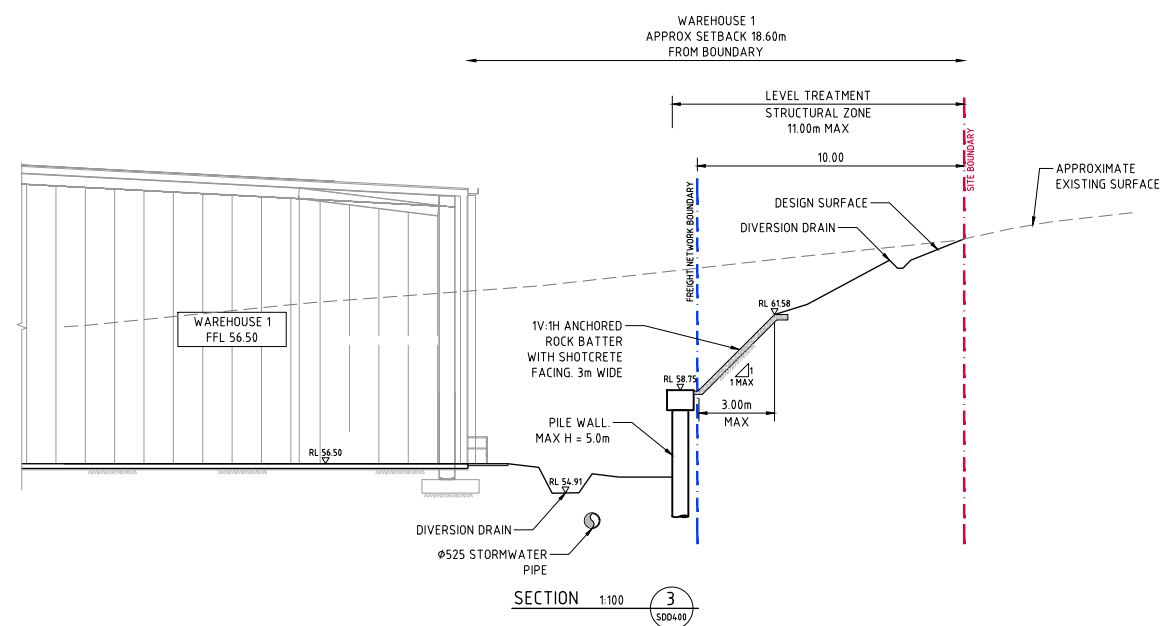
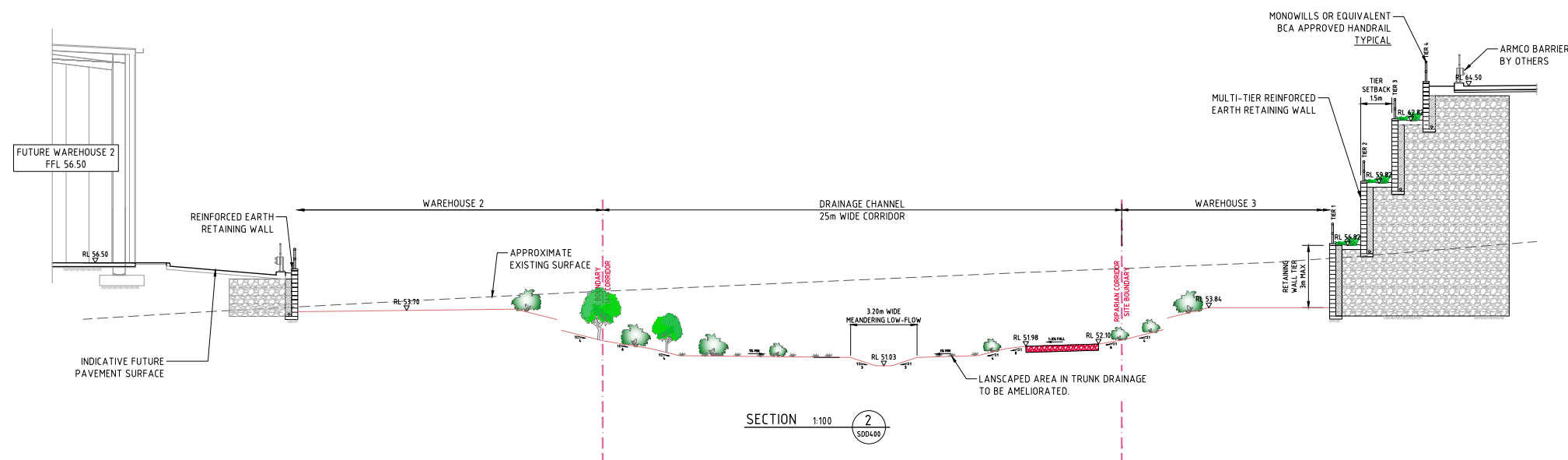
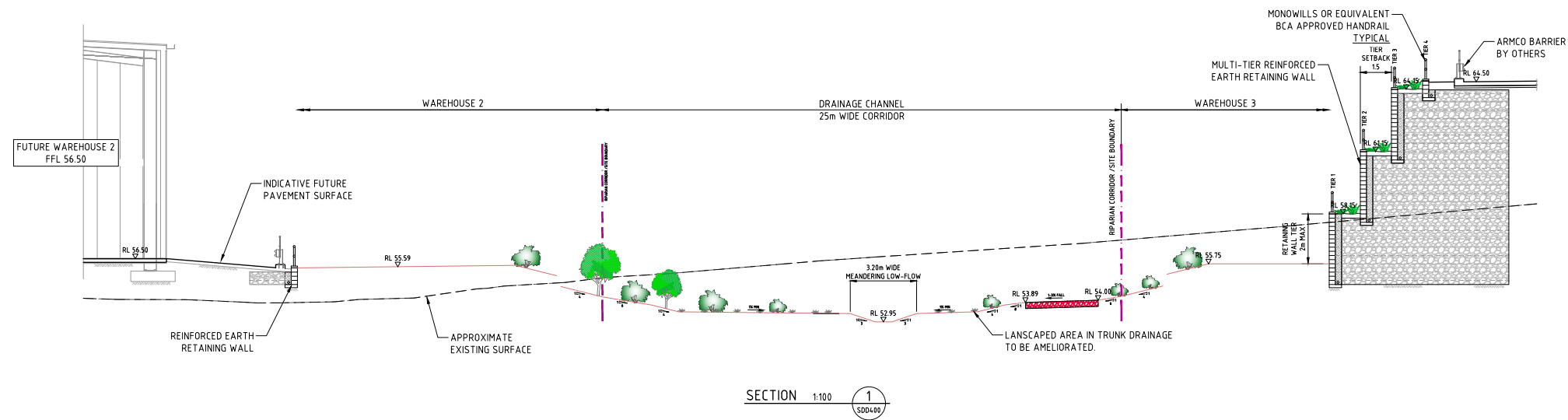
n = TURBULENCE OR SHORT-CIRCUITING PARAMETER (ADOPT 0.5)

2. PREFER L:W OF FOREBAY IS MIN 2:1
3. STORMWATER PIPE TO BE ALIGNED AT A MAXIMUM OF 45° TO THE LONG AXIS OF THE FOREBAY.

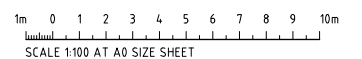


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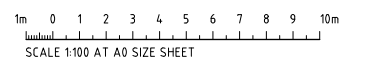
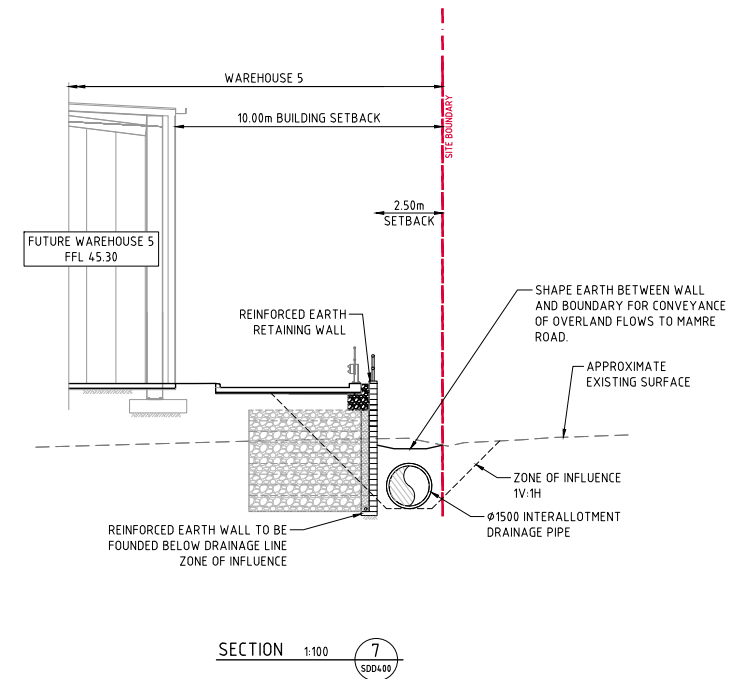
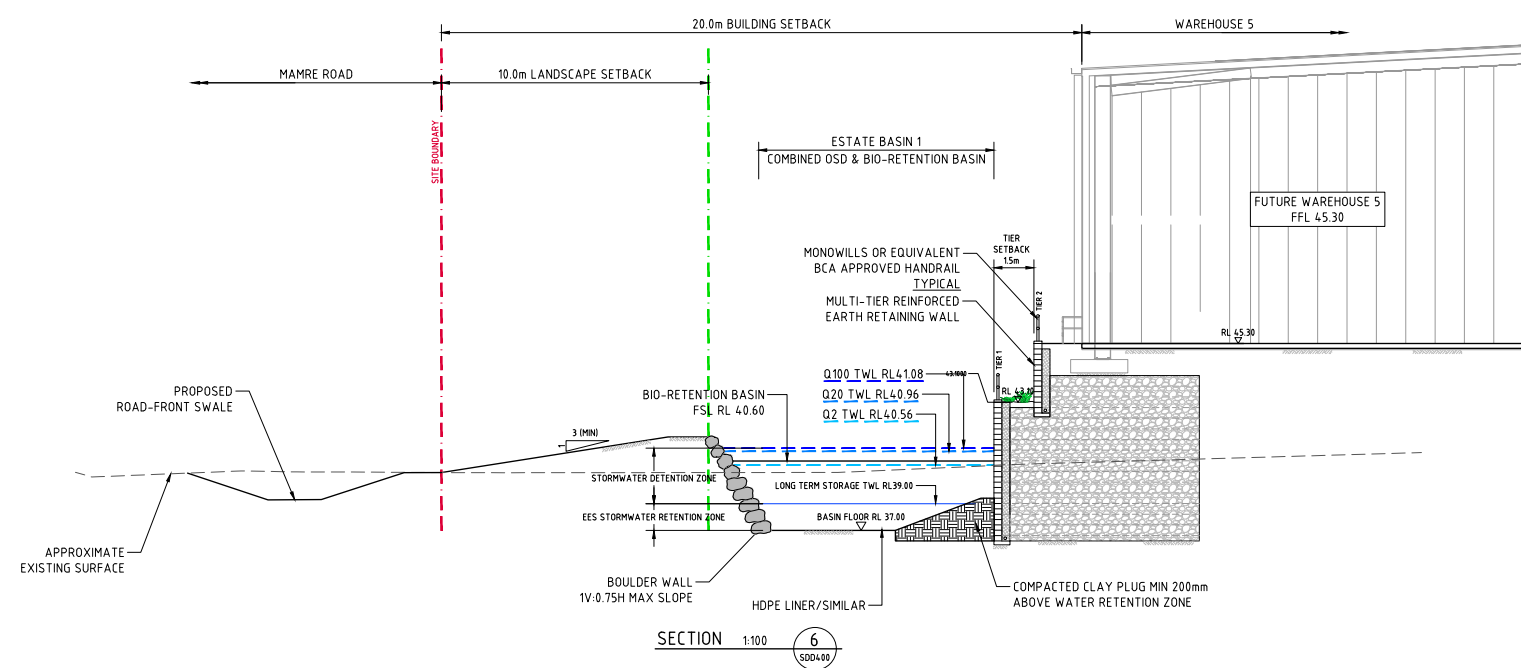
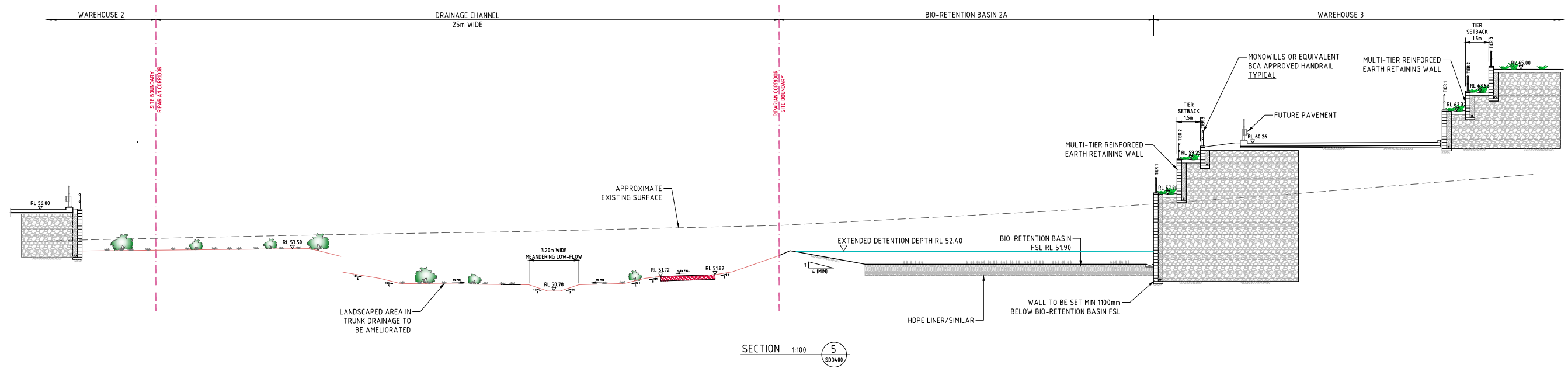
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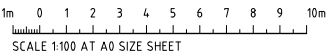
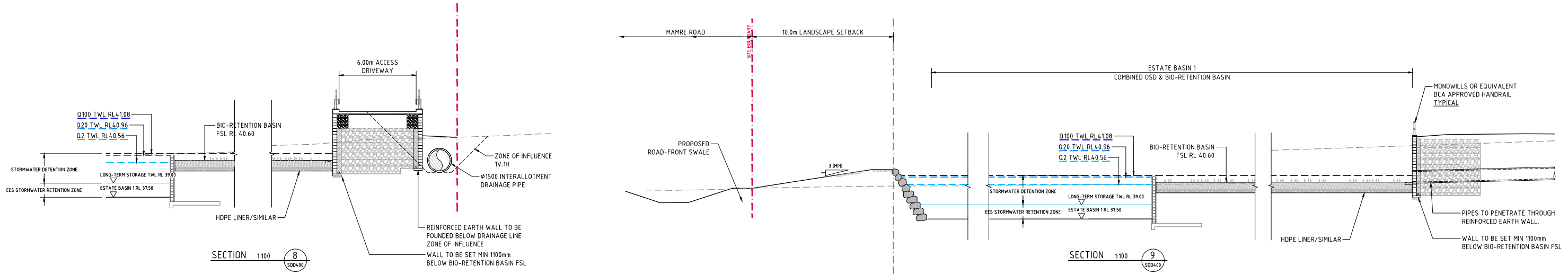


ISSUED FOR INFORMATION 22.01.24 C ISSUED FOR INFORMATION 08.12.23 B ISSUED FOR INFORMATION 05.12.23 A AMENDMENTS				ARCHITECT SB ARCHITECTS 101/1000 MARRILL STREET, MILLERS POINT NSW 2000 PH: 02 9251 7699 FAX: 02 9251 7699 WWW.SBARCHITECTS.COM.AU				CLIENT gpt				PROJECT YIRIBANA LOGISTICS ESTATE 754-770 & 784-786 MAMRE ROAD KEMPS CREEK NSW				CONSULT AUSTRALIA PO Box N419 Sydney NSW 1220 Level 4 & 5 Windmill Street, Millers Point NSW 2000 PH: 02 9251 7699 FAX: 02 9251 7699 WWW.COSTINROE.COM.AU				CRC COSTIN ROE CONSULTING CIVIL & STRUCTURAL ENGINEERS				DRAWING TITLE TYPICAL SECTIONS SHEET 1 DRAWING No. C013874.06-SDD460			
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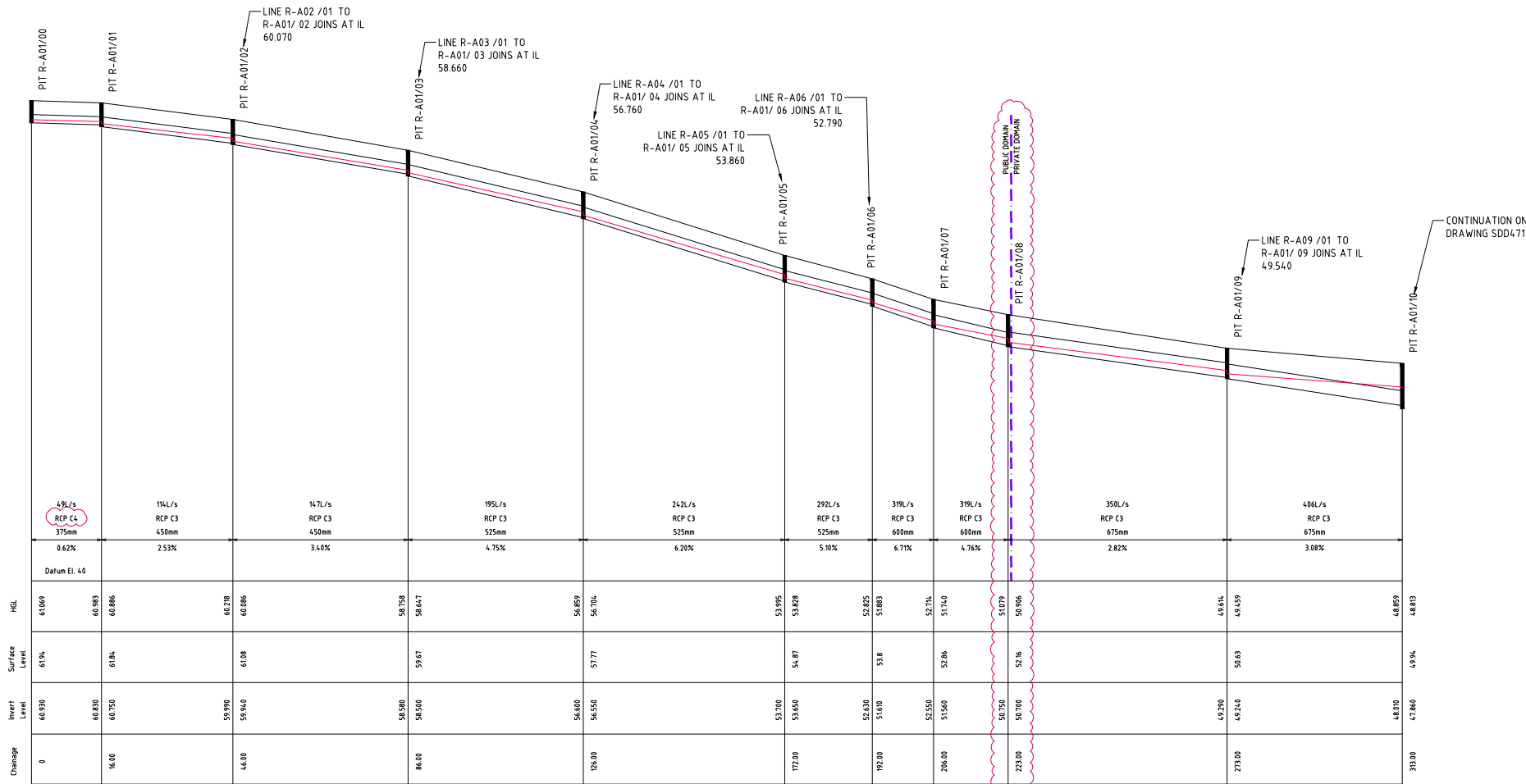
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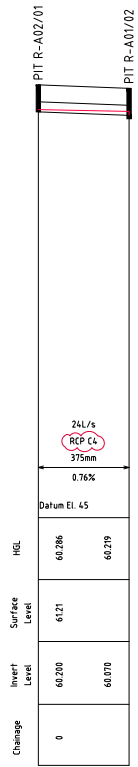


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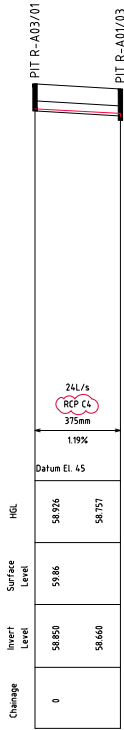
			ARCHITECT SB ARCHITECTS Suite 702, 83 Mount Street, North Sydney NSW 2060 t: +61 2 9551 7699 f: +61 2 9551 7699 e: info@sbarchitects.com.au w: www.sbarchitects.com.au		CLIENT gpt		PROJECT YIRIBANA LOGISTICS ESTATE 754-770 & 784-786 MAMRE ROAD KEMPS CREEK NSW		CONSULT AUSTRALIA Costin Roe Consulting Pty Ltd. ABN 50 003 696 446 PO Box N419 Sydney NSW 1220 Level 4, 8 Woodwell Street, Millers Point NSW 2000 p: +61 2 9251 7699 e: +61 2 9241 3731 e: mail@costinroe.com.au w: costinroe.com.au		CRC COSTIN ROE CONSULTING CIVIL & STRUCTURAL ENGINEERS		DRAWING TITLE TYPICAL SECTIONS SHEET 3 DRAWING No C013874.06-SDD462		TABLE C
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ISSUED FOR INFORMATION	05.12.23	A													
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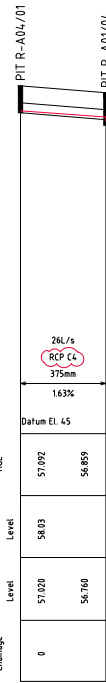
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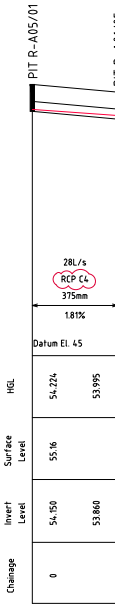
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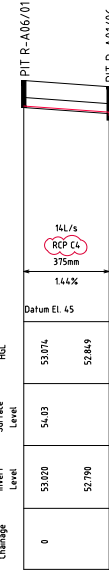
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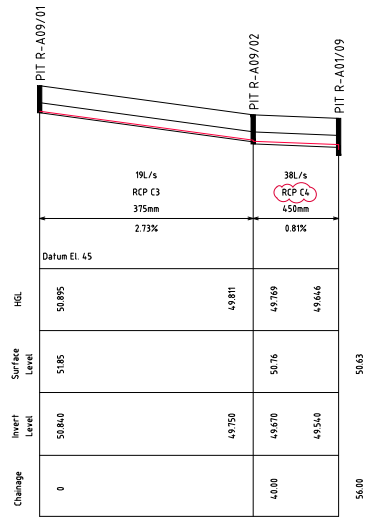
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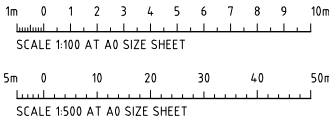


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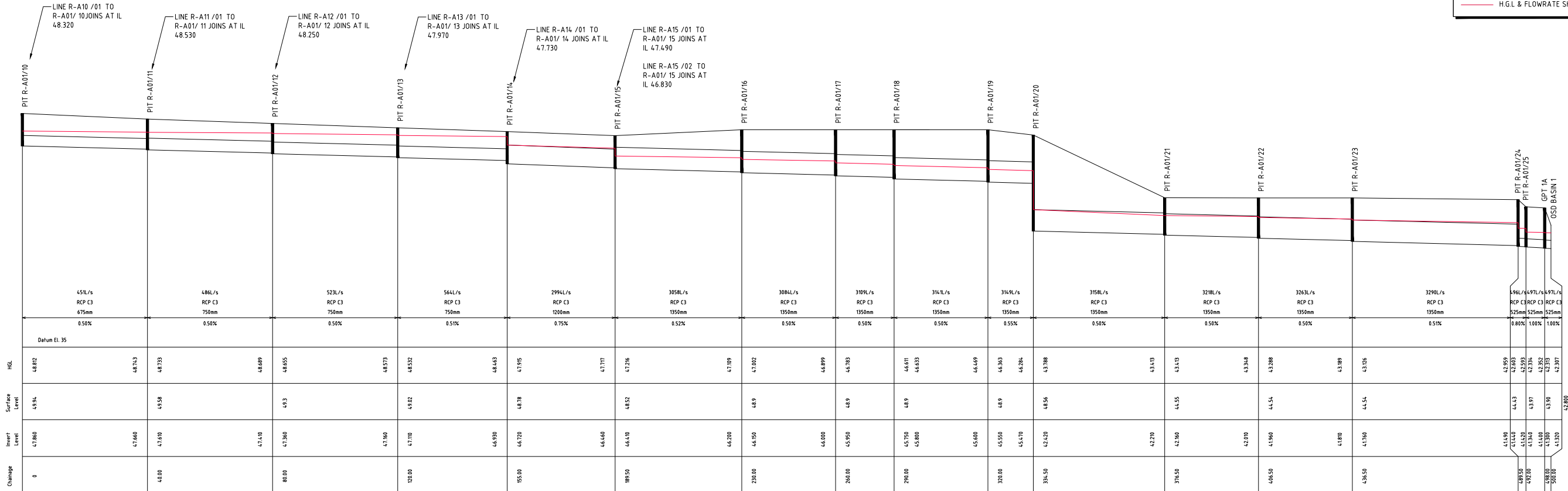
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NOTE:
H.G.L. & FLOWRATE SHOWN FOR Q20 A.R.I. STORM EVENT

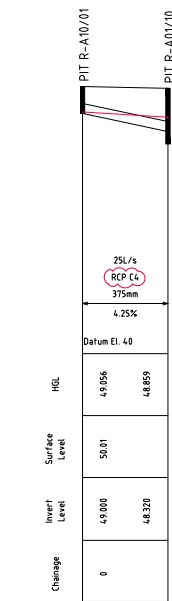


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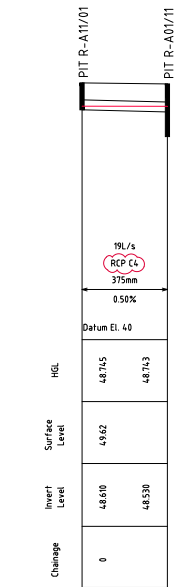
NOTE:
H.G.L & FLOWRATE SHOWN FOR Q20 A.R.I STORM EVENT



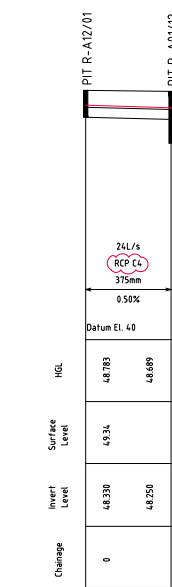
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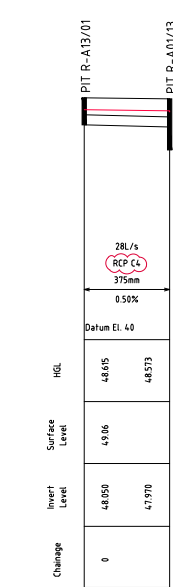
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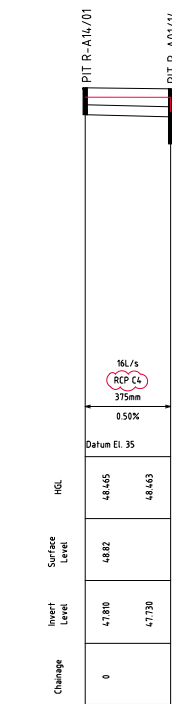
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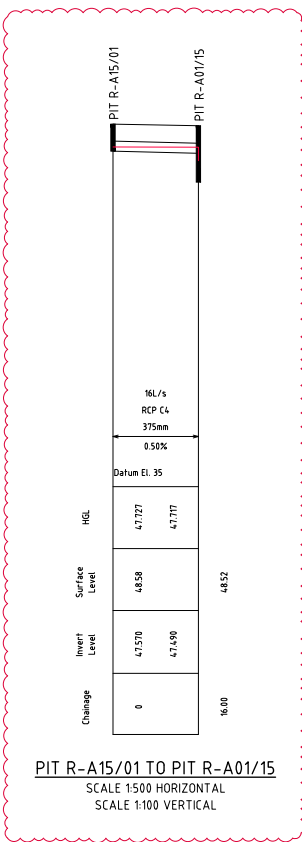
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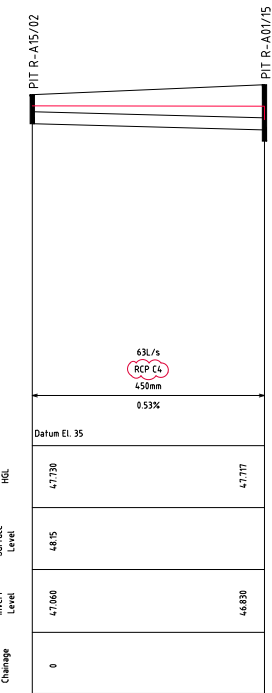
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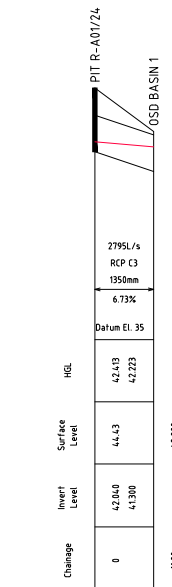
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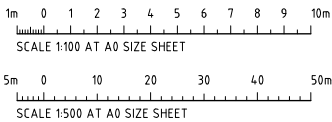
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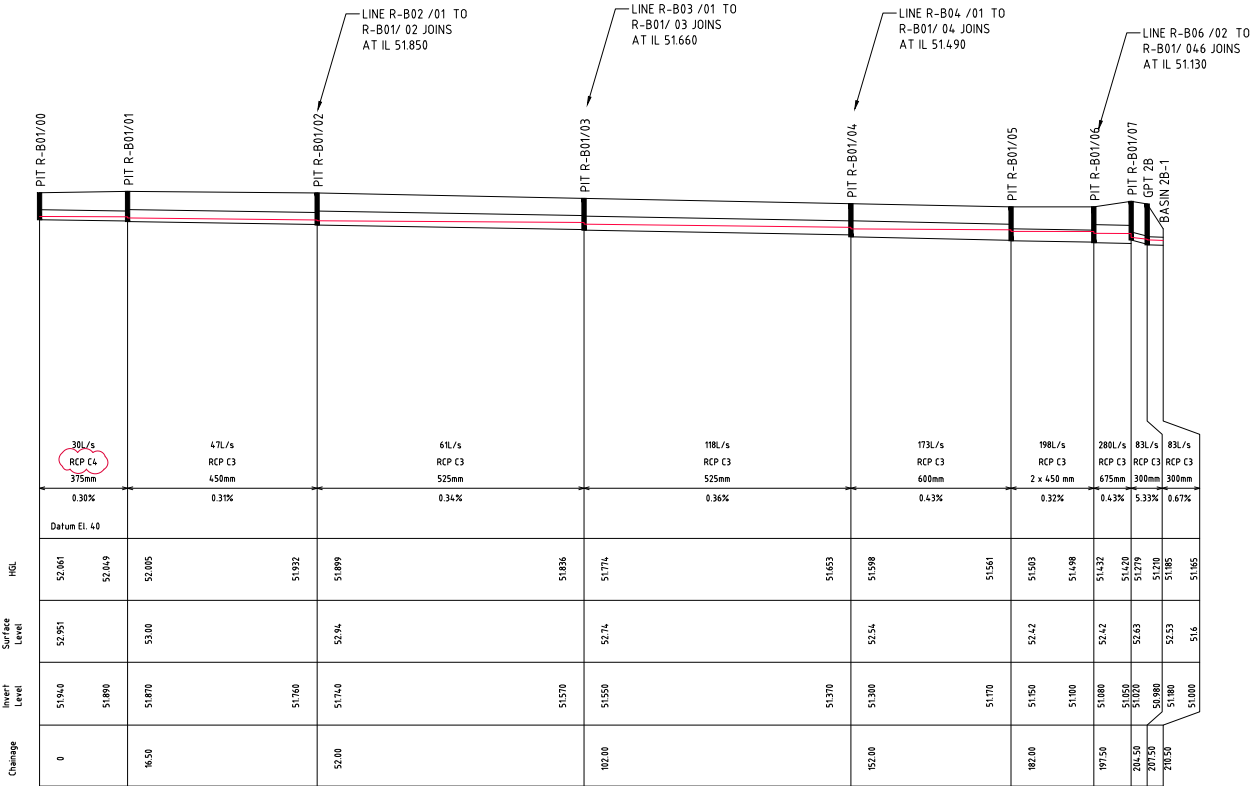
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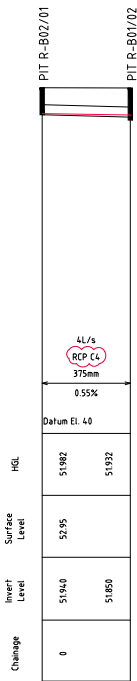
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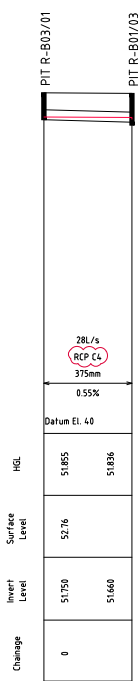
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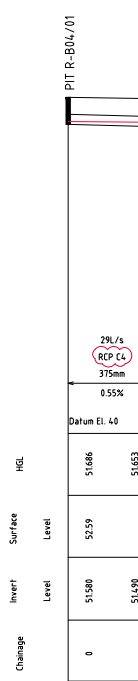
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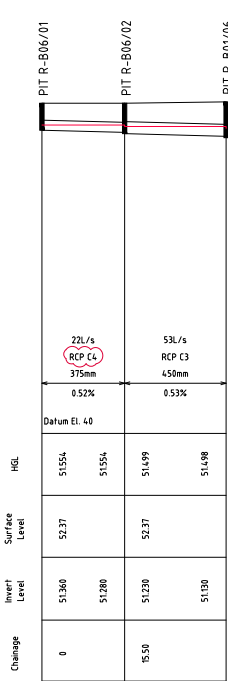
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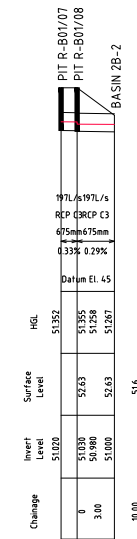
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PIT R-B04/01 TO PIT R-B01/04
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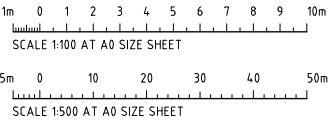


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SCALE 1:100 VERTICAL



PIT R-B01/07 TO BASIN 2B-2
SCALE 1:500 HORIZONTAL
SCALE 1:100 VERTICAL

NOTE:
H.G.L & FLOWRATE SHOWN FOR Q20 A.R.I STORM EVENT



FOR INFORMATION