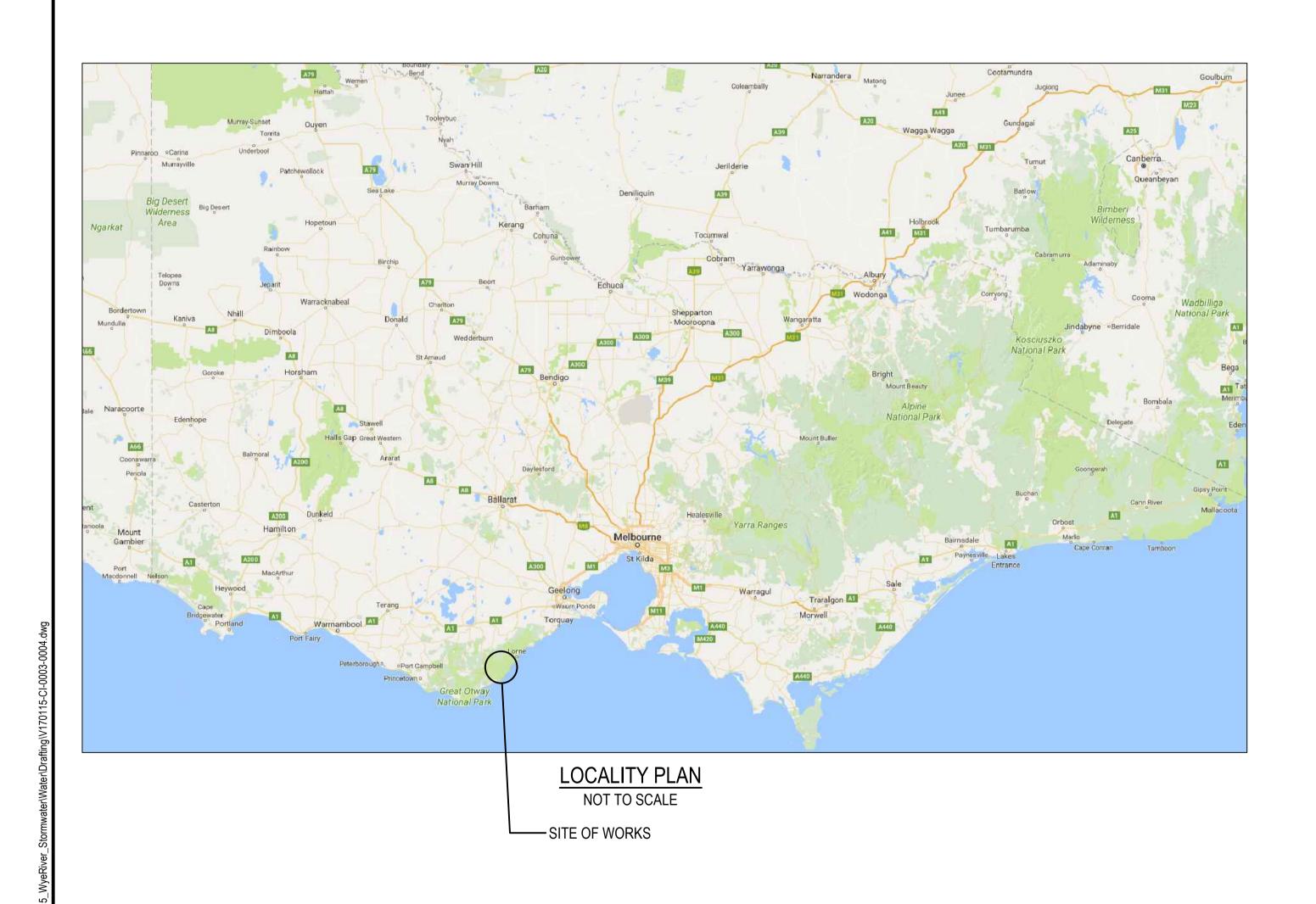
# WYE RIVER AND SEPARATION CREEK STORMWATER MANAGEMENT SYSTEM -ROAD DRAINAGE AND ANCILLARY WORKS

FOR COLAC OTWAY SHIRE





WARNING

EXTERNAL APPROVAL

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E.	Н	18/10/2017
Des	signed	Date
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COLAC OTWAY SHIRE

Project WYE RIVER AND SEPARATION CREEK STORMWATER
MANAGEMENT SYSTEM
DETAILED DESIGN ROAD DRAINAGE & ANCILLARY WORKS

Title LOCALITY PLAN

# WYE RIVER AND SEPARATION CREEK STORMWATER MANAGEMENT SYSTEM -ROAD DRAINAGE AND ANCILLARY WORKS

# COLAC OTWAY SHIRE

1. GENERAL ELECTRONIC PLANS

SURVEY SURVEY DATUM

DIMENSIONS REFERENCES PROTECTION

3. EARTHWORKS GENERAL

GEOTECHNICAL DATA

COMPACTION TO AS1289

FILLING

REINSTATEMENT 4. LANDSCAPING

5. SITE CLEARANCE

**EXISTING** 

DEMOLITION CLEAN UP

DRAINAGE **PIPES** 

**EXISTING PIPES** 

PITS

SET OUT

7. TRAFFIC MANAGEMENT GENERAL

8. SERVICES **EXISTING** 

DRAWINGS. ANY DISCREPANCY SHALL BE REFERRED TO CARDNO PRIOR TO CONSTRUCTION.

ALL DIMENSIONS ARE TO INVERT OF KERB OR OUTER EDGE OF LINEMARKING WHERE APPLICABLE THE CONTRACTOR SHALL MAINTAIN AND PROTECT THE PEGS AND SURVEY MARKS FOR THE DURATION OF THE WORKS UPON COMPLETION OF THE CIVIL WORKS THE CONTRACTOR SHALL PROVIDE CERTIFIED AS-CONSTRUCTED PLANS OF THE WORKS OTWAY SHIRE REQUIREMENTS.

EARTHWORKS SHALL BE CARRIED OUT TO THE FINISHED SURFACE LEVELS SHOWN ON THE PLANS AND CROSS SECTIONS. CUT BATTERS SHALL NOT EXCEED 1 IN 5 AND FILL BATTERS SHALL NOT EXCEED 1 IN 6 SLOPE UNLESS INDICATED OTHERWISE IN EROSION AND SEDIMENT CONTROL PLAN.

REFER TO THE GEOTECHNICAL REPORT 31/34316 PREPARED BY GHD FOR SITE RECOMMENDATIONS AND SOIL CONDITIONS ALL TOPSOIL AND OTHER DELETERIOUS MATERIAL FOR REUSE ON TOP OF TRENCH BACKFILL THE CONTRACTOR SHALL OBTAIN 98% STANDARD MINIMUM DRY DENSITY COMPACTION ON ALL FINISHED SUBGRADES AND

PRIOR TO THE COMMENCEMENT OF FILLING THE SITE SHALL BE STRIPPED AS NOTED. FILLING IS TO BE CARRIED OUT IN STRICT

ACCORDANCE WITH THE SPECIFICATIONS AND AS3798. APPROVED MATERIAL WON FROM SITE OR APPROVED IMPORTED FILL SHALL BE MOISTURE CONDITIONED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PRIOR TO BEING PLACED IN UNIFORM HORIZONTAL LAYERS OF 200mm MAXIMUM DEPTH AND COMPACTED AS SPECIFIED. ALL FINISHED SURFACES SHALL ACHIEVE A MINIMUM COMPACTION OF 98% STANDARD DRY DENSITY. COMPACTION TESTING OF ALL FILL SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF AS 3798.

THE CONTRACTOR SHALL REGRADE, SHAPE, TOPSOIL AND GRASS ALL ADJACENT EXISTING GRASSED AREAS THAT ARE DISTURBED OR ALTERED AS A CONSEQUENCE OF THE PROPOSED WORKS.

ALL EXISTING TREES IN THE VICINITY OF THE WORKS AREAS THAT ARE TO BE RETAINED SHALL BE PRUNED, ROOTS CUT & SEALED WHERE THEY EXTEND BENEATH NEW WORKS, BY APPROPRIATELY QUALIFIED PERSONNEL. TREES TO BE REMOVED SHALL HAVE ALL ROOTS GRUBBED OUT AND BE MADE GOOD WITH COMPACTED FILL.

ALL EXISTING REDUNDANT CONCRETE, PAVEMENT, SOIL, RUBBISH AND CONSTRUCTION DEBRIS SHALL BE TAKEN UP AND REMOVED PRIOR TO COMPLETION, THE CONTRACTOR SHALL ENSURE THE SITE OF WORKS IS TIDIED AND OBTAIN A CLEARANCE FROM THE SUPERVISING ENGINEER OR THE PROJECT MANAGER.

DRAINAGE PIPES ABOVE 225Ø TO BE MINIMUM OF CLASS 2 REINFORCED CONCRETE, FRCP OR SRCP (RUBBER RING JOINTED) UNLESS OTHERWISE SPECIFIED. DRAINAGE PIPES UP TO 225Ø TO BE SEWER QUALITY UPVC (RUBBER RING JOINTED). COMPACTED CLASS 2 FCR BACKFILL SHALL BE INSTALLED TO PIPES UNDER ROAD PAVEMENTS AND BUILDING SLABS. TRENCHES IN LANDSCAPE AREAS CAN BE BACKFILLED WITH SELECTED CLAY FILL. HDPE PIPES TO BE USED WHEREVER MAX. PIPE FLOWS VELOCITIES EXCEED

ALL EXISTING PIPES THAT WILL NOW BE BENEATH NEW ROAD PAVEMENT SHALL HAVE THE EXISTING BACKFILL REMOVED AND REPLACED WITH A CRUSHED ROCK BACKFILL COMPACTED TO 98% STANDARD.

DRAINAGE PITS TO BE CAST IN-SITU CONCRETE PITS AS DETAILED OR APPROVED PRECAST CONCRETE COMPLYING WITH THE RELEVANT AUSTRALIAN STANDARDS. ALL PITS DEEPER THAN 1.0M ARE TO BE PROVIDED WITH APPROVED STEP IRONS AT 300 MAX.

PIT LOCATIONS AND PIPE INVERT LEVELS ARE SPECIFIED ON THE PIT SCHEDULE IN DWG V170115-CI-### AND V170115-CI-###.

TRAFFIC MANAGEMENT SHALL BE ARRANGED BY THE CONTRACTOR FOR THE DURATION OF THE WORKS IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1742.3-2002 FOR CONSTRUCTION TRAFFIC MANAGEMENT AND TO THE SATISFACTION OF ALL PARTIES, INCLUDING THE PROVISION OF ALL NECESSARY SIGNAGE, LIGHTING AND BARRICADING. TRAFFIC FLOWS IN ALL ABUTTING ROADWAYS AND ACCESS TO THE SITE SHALL REMAIN UNIMPEDED FOR THE DURATION OF THE CONTRACT.

ALL STATUTORY AUTHORITY SERVICES MUST BE MAINTAINED AND PROTECTED BY THE CONTRACTOR AT ALL TIMES UNLESS OTHERWISE SHOWN. EXISTING SERVICE LOCATIONS SHOWN HAVE BEEN OBTAINED FROM STATUTORY AUTHORITY RECORDS AND/OR SITE PLANS WHERE AVAILABLE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN AND ALL SERVICES SHOULD BE PROVEN ON SITE PRIOR TO THE COMMENCEMENT OF WORKS IN THEIR VICINITY.

CONTACTS CIVIL CONTRACTOR TO CONTACT THE FOLLOWING AUTHORITIES FOR RELOCATION OF CABLES . U/G MAINS OR POLES WHERE REQUIRED.

> UTILITY OFFICE NO. **POWERCOR - BALLARAT** 132 206 TELSTRA VICTAS 1800 653 935 COLAC OTWAY SHIRE.

ADJUSTMENTS ALL EXISTING PITS AND SERVICE FITTINGS THAT ARE TO REMAIN WITHIN THE PAVEMENT AREAS SHALL BE REBUILT TO MATCH ELSEWHERE EXISTING SERVICES SHALL BE ADJUSTED TO SUIT NEW ADJACENT LEVELS. THE RELEVANT AUTHORITY IS TO B

REQUIREMENTS

7. INSPECTIONS

**GENERAL** 

**EXTERNAL** 

GENERAL

MAINTENANCE PERIOD

**WORKING ON SLOPES** 

MOVING EQUIPMENT

**OPERATING HOURS** 

PROPERTY

**DRIVEWAYS** 

WORKING IN PRIVATE

ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PROGRAMME TO THE SATISFACTION OF THE SUPERVISING ENGINEER AND SUBJECT TO PERIODICAL INSPECTION AND WRITTEN STAGED APPROVAL. ADDITIONAL

TO SEPARATE INSPECTIONS. SEVEN DAYS NOTICE TO BE GIVEN OF WORK COMMENCING. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY ROAD OPENING PERMITS AND AUTHORITY APPROVALS PRIOR TO COMMENCING WORKS

WHERE REQUIRED MATCH ALL NEW KERBS TO EXISTING LEVEL NEATLY, ENSURING MINIMUM 1 IN 250 GRADE, SAW CUTTING AND REINSTATING PAVEMENT IN FRONT OF KERB TO FALL TO NEW KERB LEVEL

FOR ALL WORKS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COPY OF THE CURRENT SPECIFICATIONS, ALL RELEVANT STANDARD DRAWINGS AND ALL ASSOCIATED REVISIONS AND AMENDMENTS ETC.

ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 4000-1997 GENERAL CONDITIONS OF CONTRACT. A 12 MONTHS MAINTENANCE PERIOD WILL APPLY TO THIS CONTRACT UNLESS NOTED OTHERWISE. CONTRACTOR TO PROVIDE WORK METHOD STATEMENT FOR WORKS ON SLOPES PRIOR TO COMMENCEMENT OF WORKS. EXCAVATIONS AND OTHER MACHINERY THAT WILL DAMAGE THE ROAD SURFACE IS TO BE FLOATED VIA TRUCK/TRAILOR UNLESS RUBBER TRACKS ARE FITTED.NO EQUIPMENT IS TO BE TRANSPORTED PRIOR TO 7AM MONDAY-FRIDAY AND 8AM SATURDAY AND

NO WORK IS TO TAKE PLACE OUTSIDE OF THE FOLLOWING HOURS 7AM-6PM MONDAY-FRIDAY AND 7AM-1PM SATURDAY. A MINIMUM 4 DAY NOTICE IS TO BE GIVEN TO RESIDENTS IF WORKS TO BE UNDERTAKEN WITHIN PRIVATE PROPERTY.

RESIDENTS ARE TO BE CONTACTED TO DISCUSS DRIVEWAY COLOUR PREFERENCE, APRON LENGTH AND CONSTRUCTION TIMING.

	SCHEDULE OF DRAWINGS
DRAWING No.	DESCRIPTION
V170115-CI-0003	LOCALITY PLAN
V170115-CI-0004	GENERAL NOTES AND DRAWING SCHEDULE
ROAD DRAINAGE AND ANCI	ILLARY WORKS
WYE RIVER NORTH	
V170115-CI-4000	WYE RIVER NORTH OVERALL LAYOUT PLAN
V170115-CI-4010	WYE RIVER NORTH DETAILED LAYOUT PLAN SHEET 1 OF 6
V170115-CI-4011	WYE RIVER NORTH DETAILED LAYOUT PLAN SHEET 2 OF 6
V170115-CI-4012	WYE RIVER NORTH DETAILED LAYOUT PLAN SHEET 3 OF 6
V170115-CI-4013	WYE RIVER NORTH DETAILED LAYOUT PLAN SHEET 4 OF 6
V170115-CI-4014	WYE RIVER NORTH DETAILED LAYOUT PLAN SHEET 5 OF 6
V170115-CI-4015	WYE RIVER NORTH DETAILED LAYOUT PLAN SHEET 6 OF 6
V170115-CI-4100	WYE RIVER NORTH TYPICALS DETAILS SHEET 1 OF 5
V170115-CI-4101	WYE RIVER NORTH TYPICALS DETAILS SHEET 2 OF 5
V170115-CI-4102	WYE RIVER NORTH TYPICALS DETAILS SHEET 3 OF 5
V170115-CI-4103	WYE RIVER NORTH TYPICALS DETAILS SHEET 4 OF 5
V170115-CI-4104	WYE RIVER NORTH TYPICALS DETAILS SHEET 5 OF 5
WYE RIVER SOUTH	
V170115-CI-5000	WYE RIVER SOUTH OVERALL LAYOUT PLAN
V170115-CI-5010	WYE RIVER SOUTH DETAILED LAYOUT PLAN SHEET 1 OF 3
V170115-CI-5011	WYE RIVER SOUTH DETAILED LAYOUT PLAN SHEET 2 OF 3
V170115-CI-5012	WYE RIVER SOUTH DETAILED LAYOUT PLAN SHEET 3 OF 3
V170115-CI-5050	WYE RIVER SOUTH ROAD AND ANCILLARY WORKS INSETS SHEET 1 OF 2
V170115-CI-5051	WYE RIVER SOUTH ROAD AND ANCILLARY WORKS INSETS SHEET 2 OF 2
V170115-CI-5100	WYE RIVER SOUTH TYPICALS DETAILS SHEET 1 OF 6
V170115-CI-5101	WYE RIVER SOUTH TYPICALS DETAILS SHEET 2 OF 6
V170115-CI-5102	WYE RIVER SOUTH TYPICALS DETAILS SHEET 3 OF 6
V170115-CI-5103	WYE RIVER SOUTH TYPICALS DETAILS SHEET 4 OF 6
V170115-CI-5104	WYE RIVER SOUTH TYPICALS DETAILS SHEET 5 OF 6
V170115-CI-5105	WYE RIVER SOUTH TYPICALS DETAILS SHEET 6 OF 6
V170115-CI-5150	WYE RIVER SOUTH DRAINAGE LONGITUDINAL SECTION AND PIT SCHEDULE
SEPARATION CREEK	
V170115-CI-6000	SEPARATION CREEK OVERALL LAYOUT PLAN
V170115-CI-6010	SEPARATION CREEK DETAILED LAYOUT PLAN SHEET 1 OF 3
V170115-CI-6011	SEPARATION CREEK DETAILED LAYOUT PLAN SHEET 2 OF 3
V170115-CI-6012	SEPARATION CREEK DETAILED LAYOUT PLAN SHEET 3 OF 3
V170115-CI-6050	SEPARATION CREEK ROAD AND ANCILLARY WORKS INSETS
V170115-CI-6100	SEPARATION CREEK TYPICALS DETAILS SHEET 1 OF 5
V170115-CI-6101	SEPARATION CREEK TYPICALS DETAILS SHEET 2 OF 5
V170115-CI-6102	SEPARATION CREEK TYPICALS DETAILS SHEET 3 OF 5
V170115-CI-6103	SEPARATION CREEK TYPICALS DETAILS SHEET 4 OF 5
V170115-CI-6104	SEPARATION CREEK TYPICALS DETAILS SHEET 5 OF 5
V170115-CI-6150	SEPARATION CREEK DRAINAGE LONGITUDINAL SECTION AND PIT SCHEDULE

#### WARNING

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25/10/2017 | FOR TENDER E.H E.H FOR TENDER 18/10/2017 Date Description Des. | Verif. | Appd

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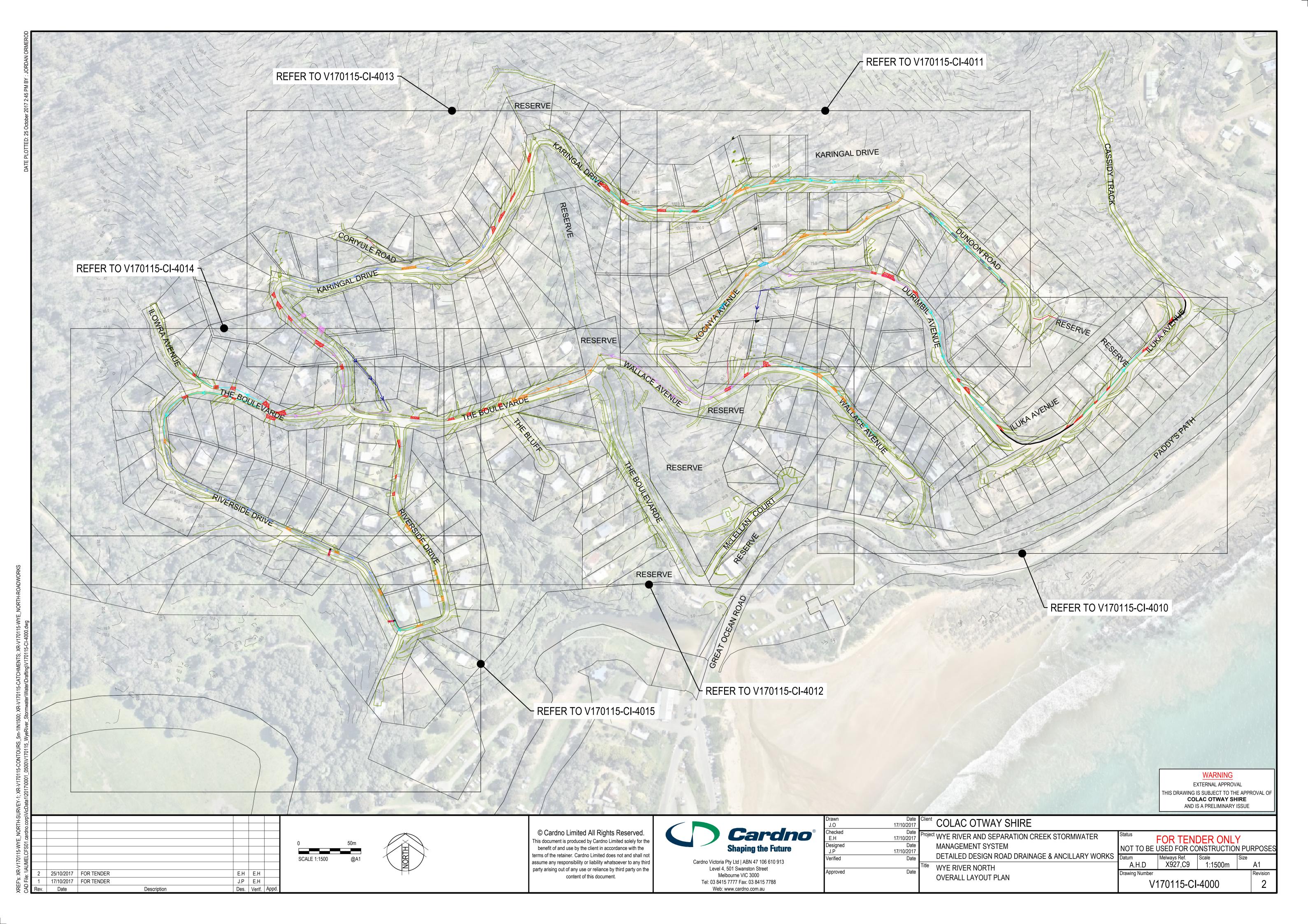


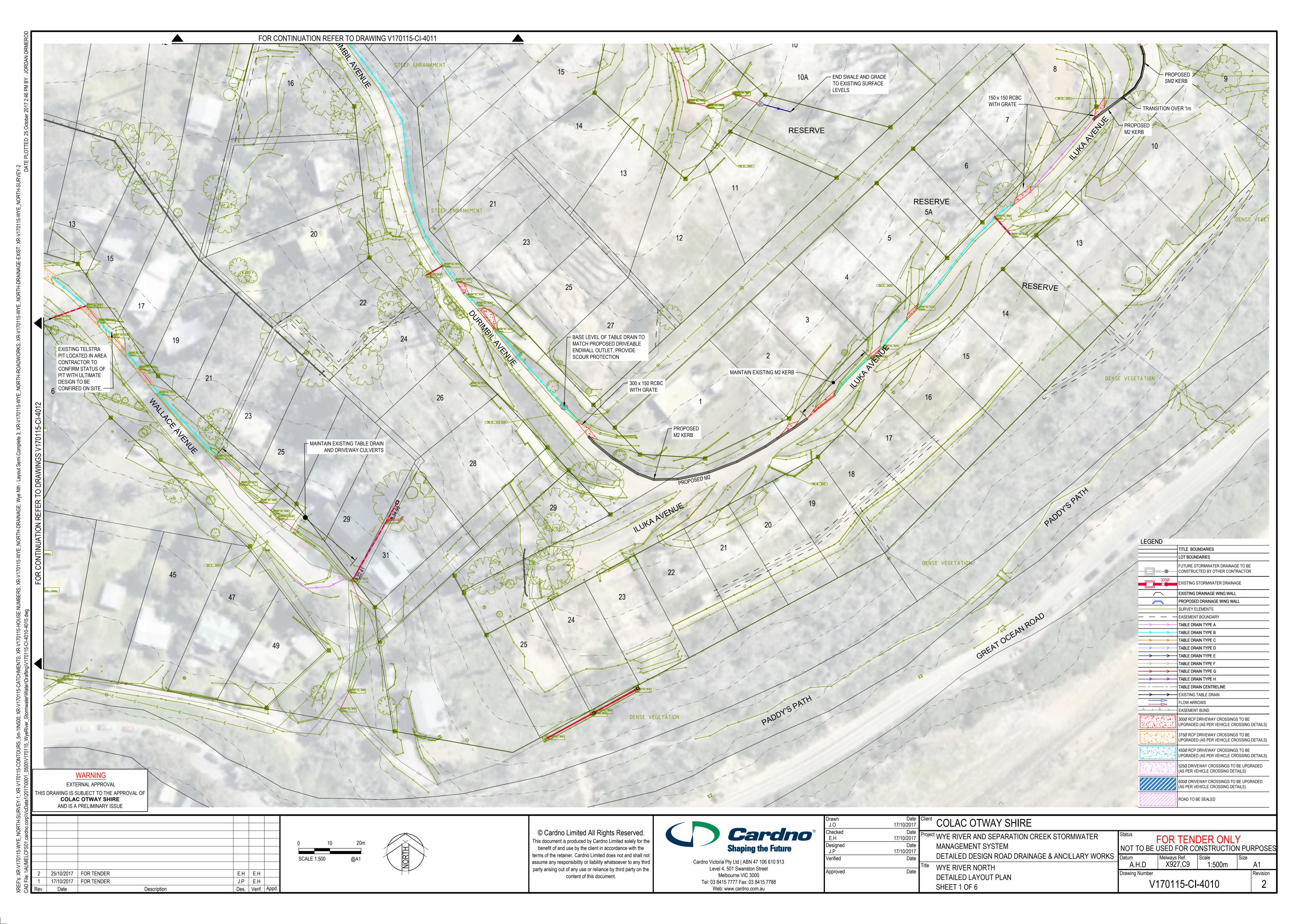
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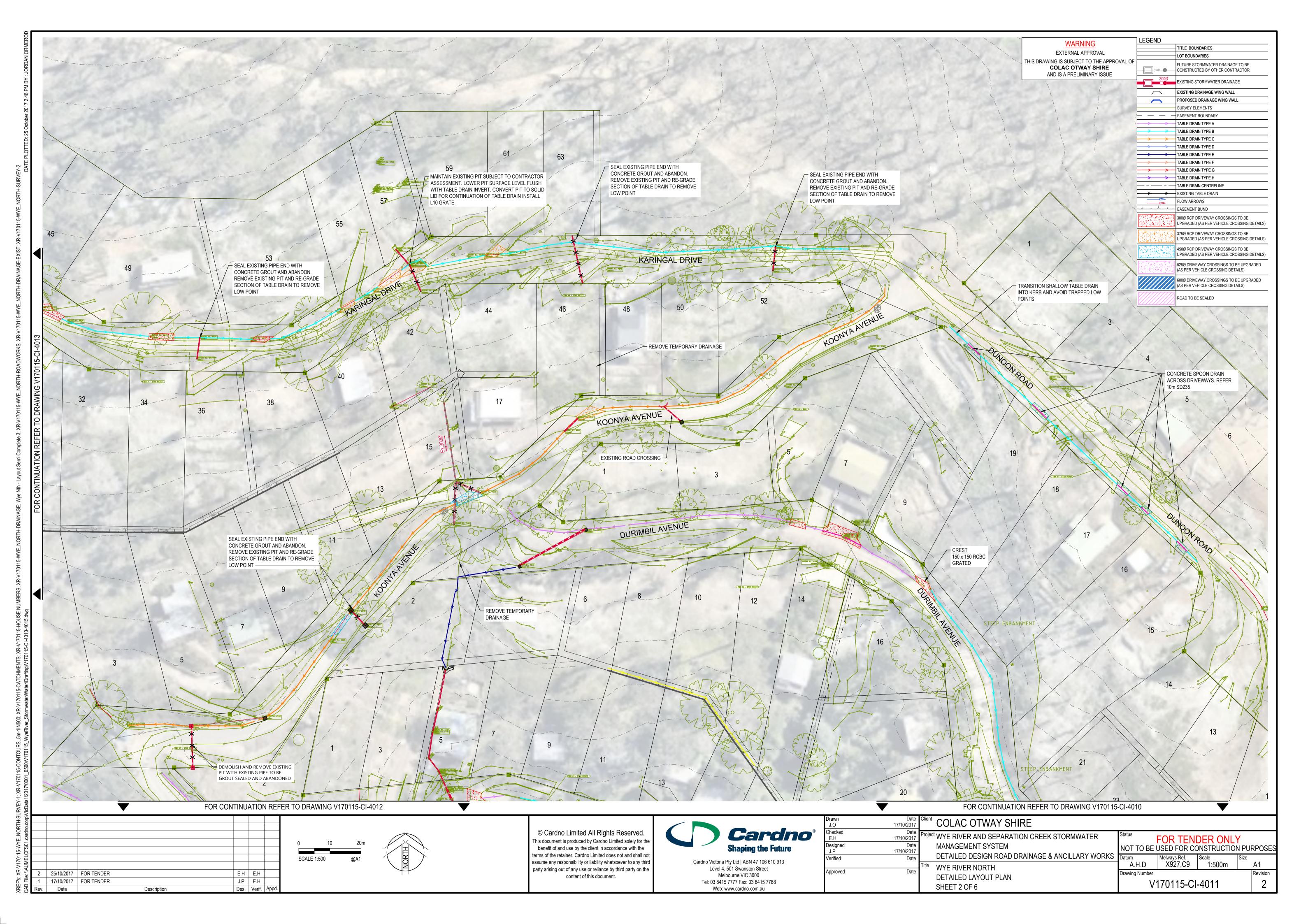
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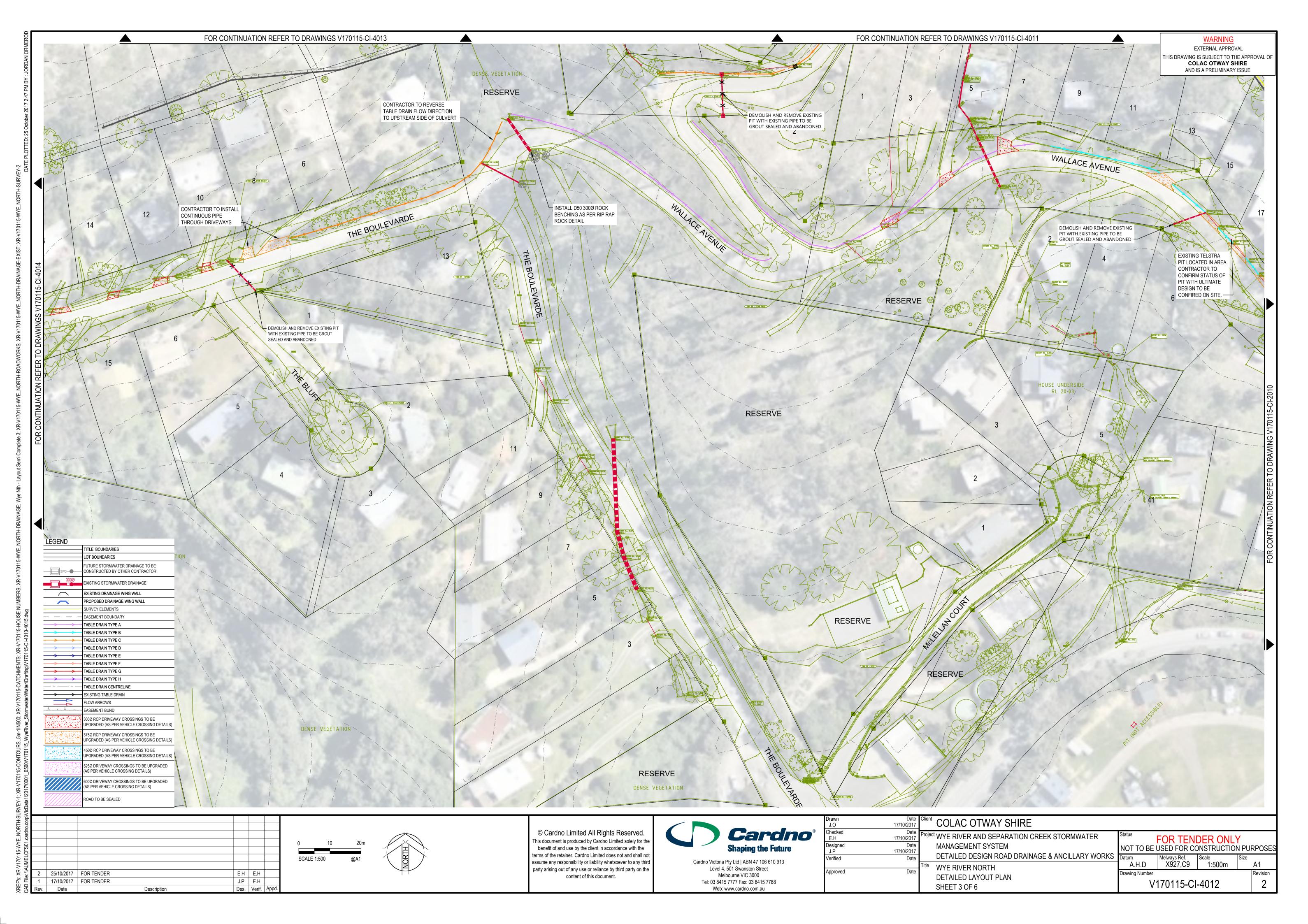
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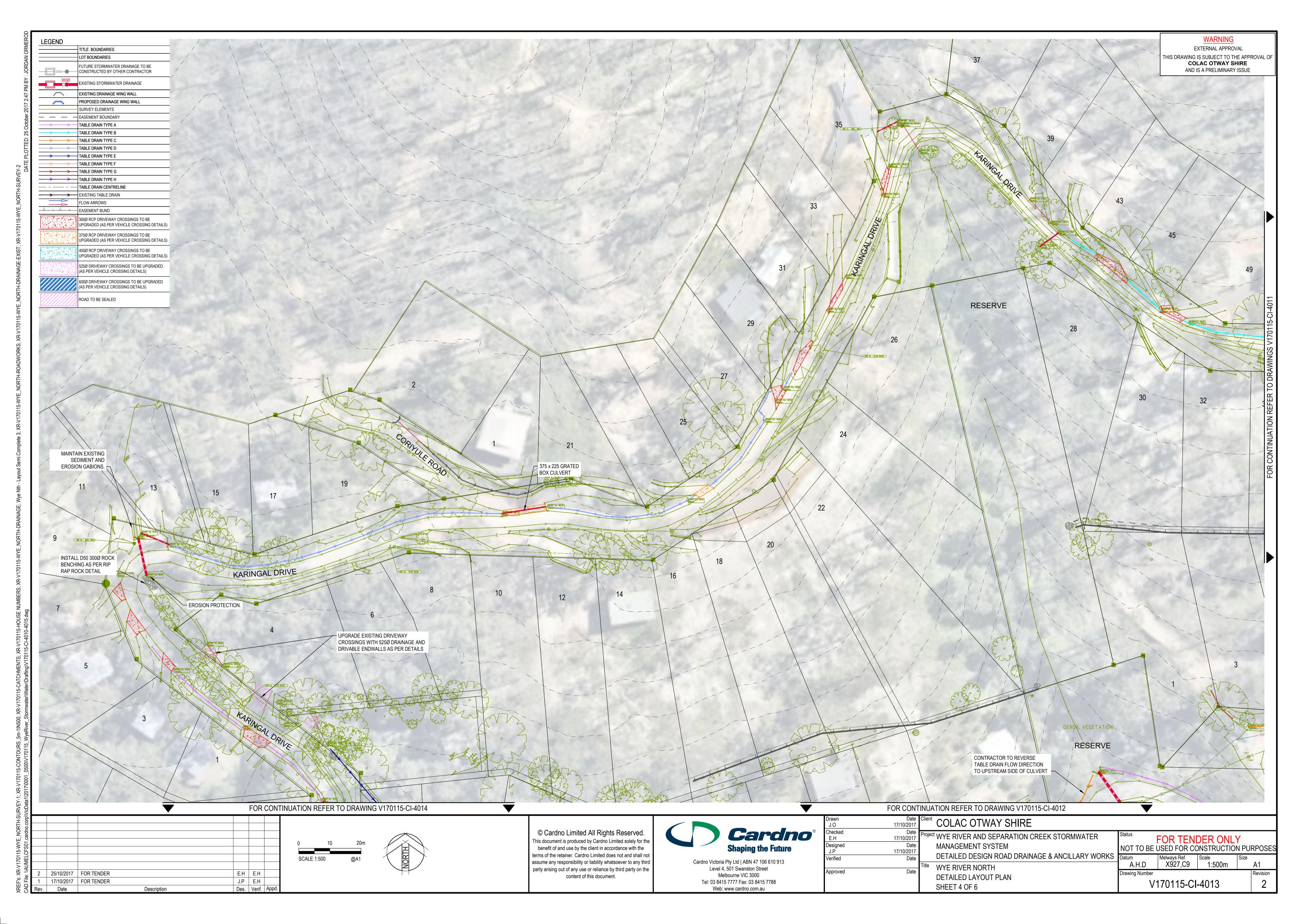
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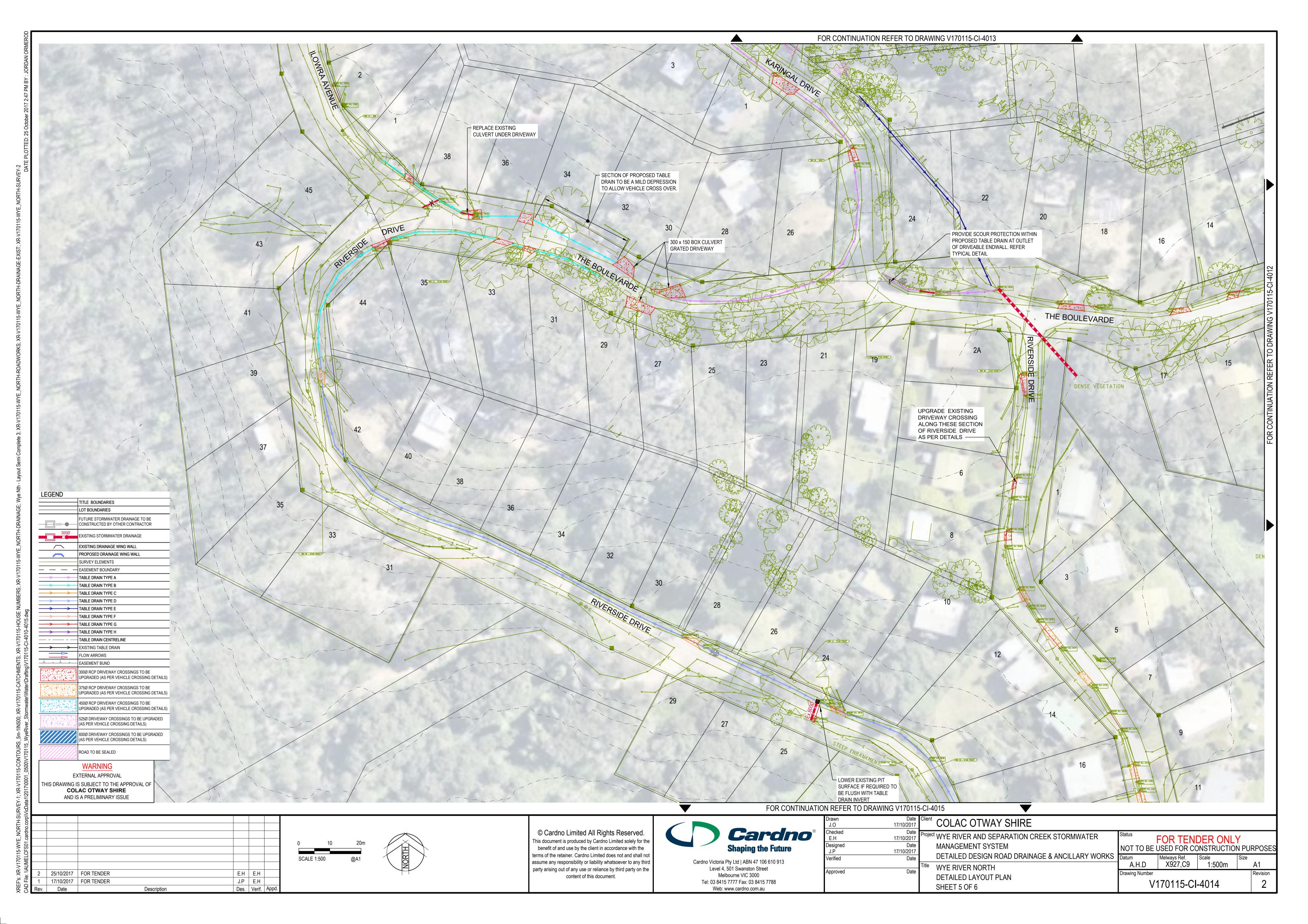


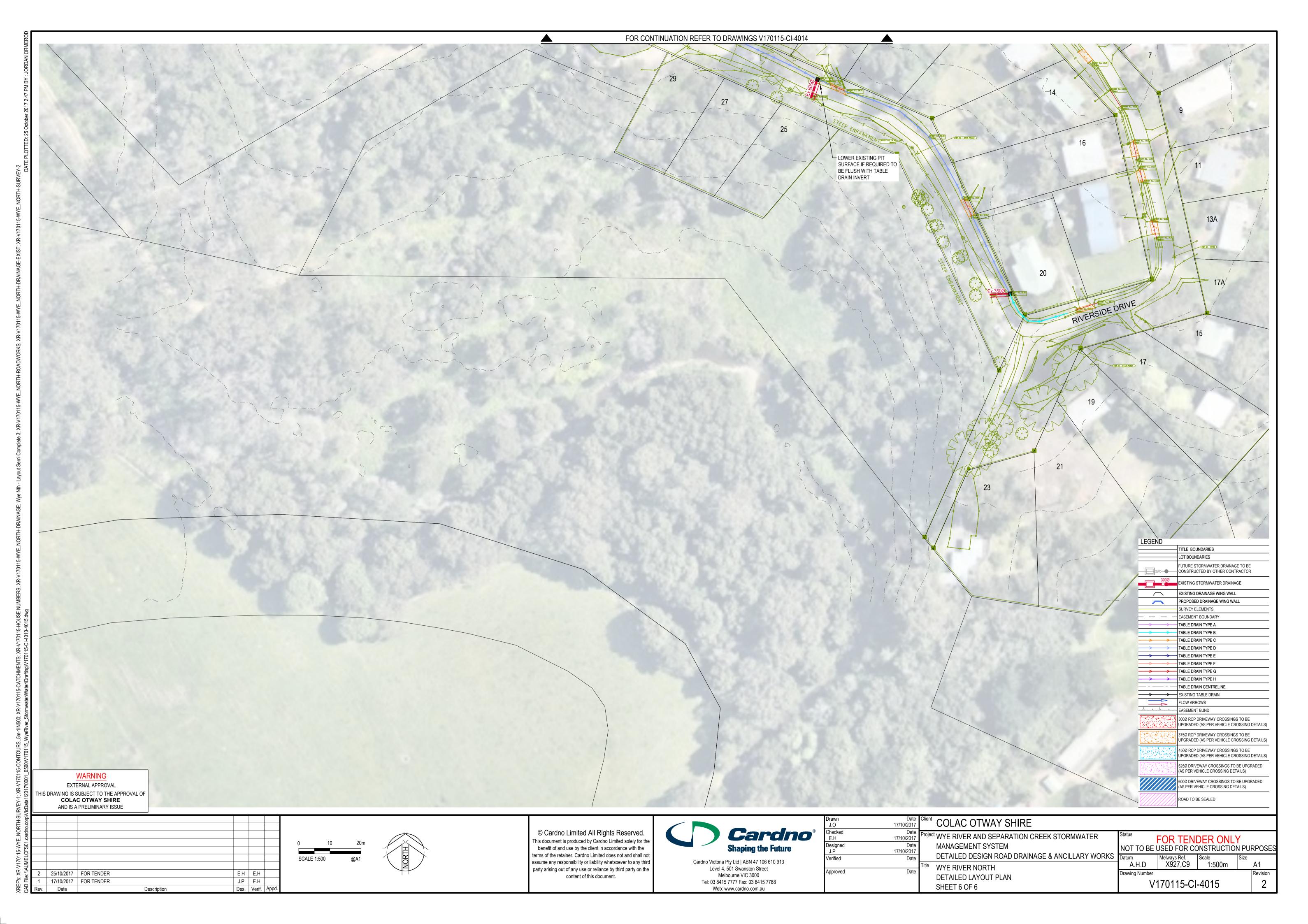


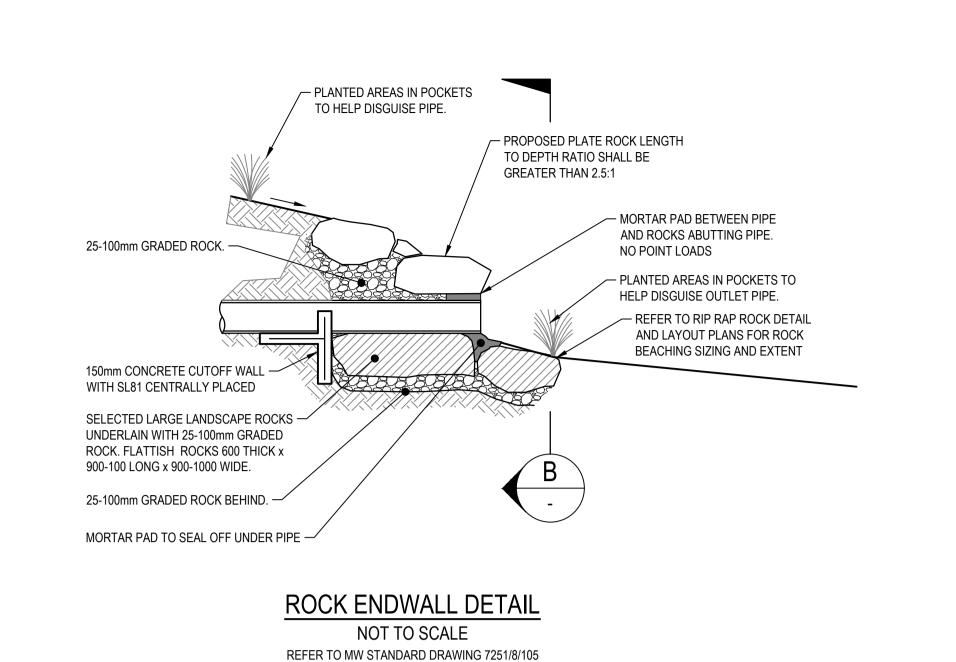


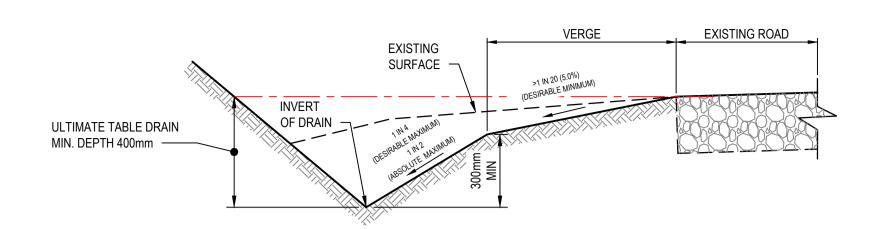




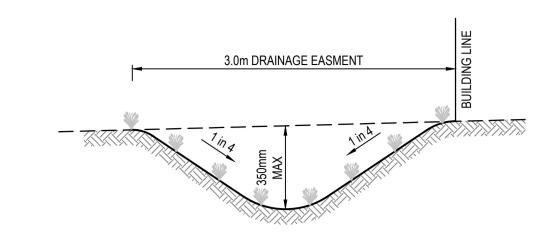




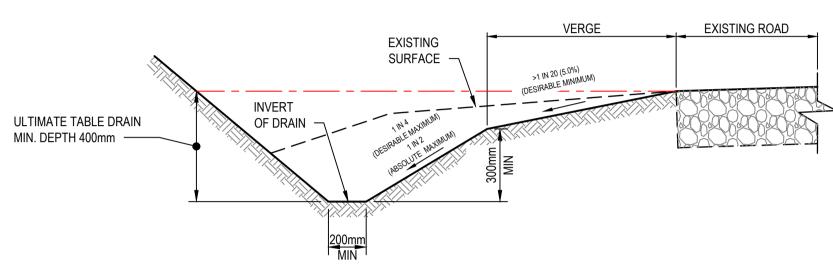




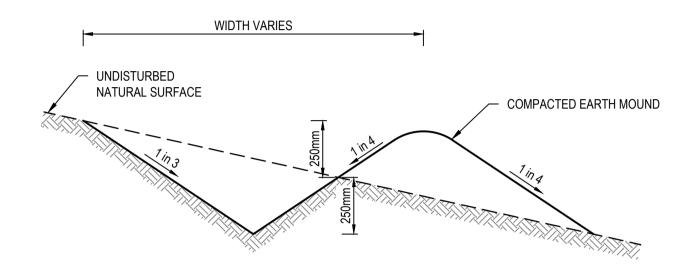
TYPICAL TABLE DRAIN (TYPE-A) NOT TO SCALE



EASMENT CATCH DRAIN DETAIL (TYPE-E) NOT TO SCALE NOTE: DRAINS TO BE GRADED TO NOMINATED OUTLETS. FINISH WITH 100mm TOPSOIL

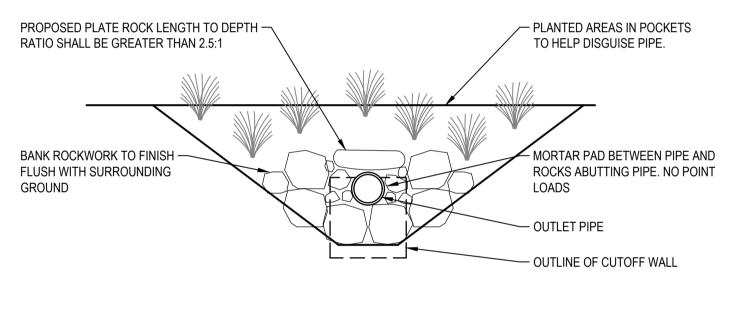


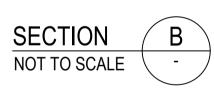
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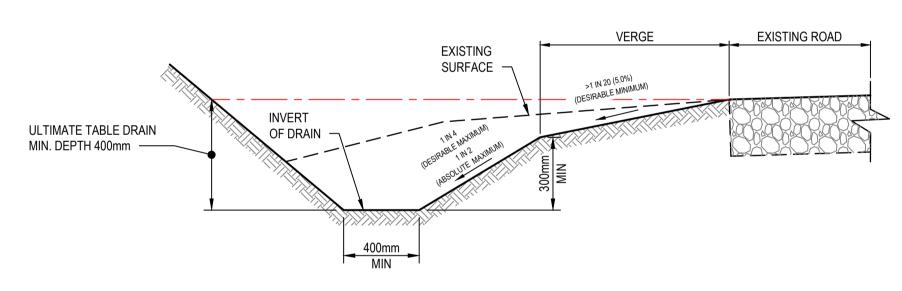


TYPICAL MOUNDED CATCH DRAIN( TYPE-F)

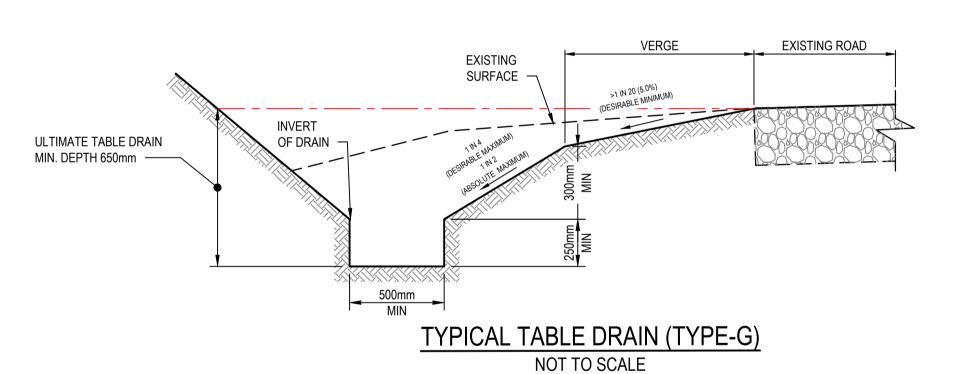
NOT TO SCALE NOTE: DRAINS TO BE GRADED TO NOMINATED OUTLETS. FINISH WITH 100mm TOPSOIL

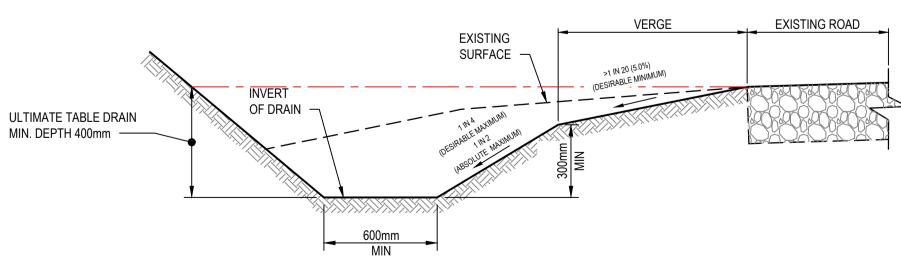




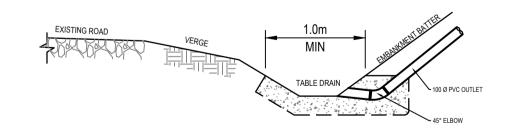


TYPICAL TABLE DRAIN (TYPE-C) NOT TO SCALE

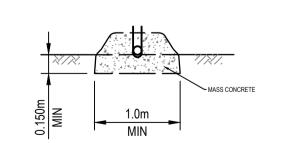




TYPICAL TABLE DRAIN (TYPE-D) NOT TO SCALE



HOUSE OUTLETS INTO TABLE DRAIN NOT TO SCALE



**ELEVATION** NOT TO SCALE

WARNING

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J.P	17/10/20
Verified	Da
Approved	Da

Client	COLAC OTWAY SHIRE
Project	WYE RIVER AND SEPARATION CREEK STORMWATER

SHEET 1 OF 5

MANAGEMENT SYSTEM DETAILED DESIGN ROAD DRAINAGE & ANCILLARY WORKS WYE RIVER NORTH TYPICALS DETAILS

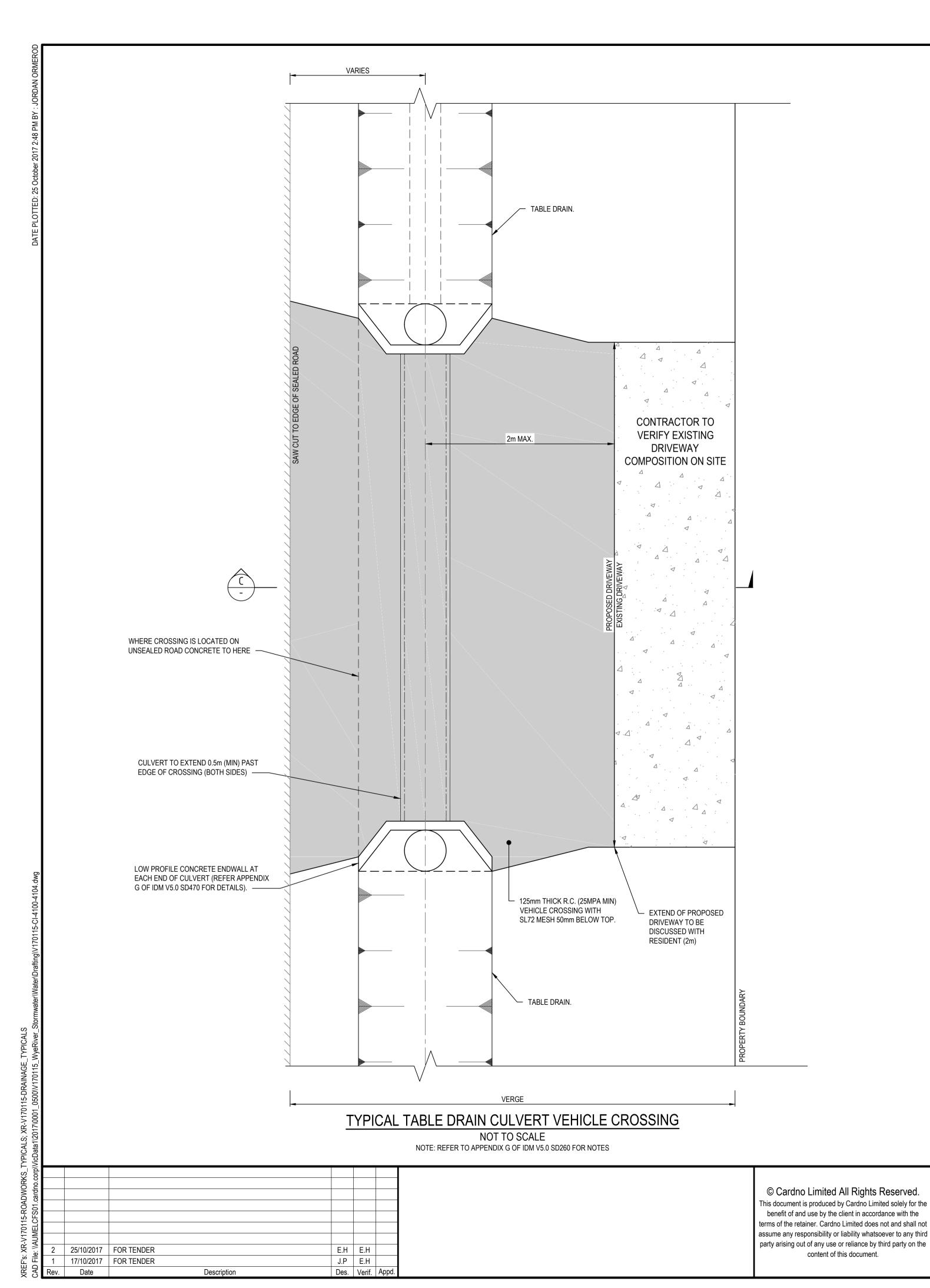
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# NOTES:

- CONTRACTOR TO DISCUSS COLOUR OF CONCRETE APRON WITH RESIDENT.
- CONCRETE COLOURS ARE:
   CHARCOAL
  - LIGHT BROWN
  - STONEREGULAR
- CONCRETE FINISH TO BE AT A MINIMUM BROOM FINISH TO IMPROVE SKID RESISTANCE.
- PIPE SIZE NOTED ON PLAN
- TYPE OF CULVERT TO BE DETERMINED ON SITE WITH SUPERINTENDENT.



CHARCOAL







REGULAR

EXISTING ROAD

SHOULDER

SHOULDER

SHOULDER

EXISTING ROAD

SHOULDER

EXISTING ROAD

SHOULDER

WHERE CONNECTING TO EXISTING CONCRETE INSTALL 100mm x 7mm DOWEL RODS @ 300mm CENTRES

SHOULDER

SHOUL

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Cardno Shaping the Future

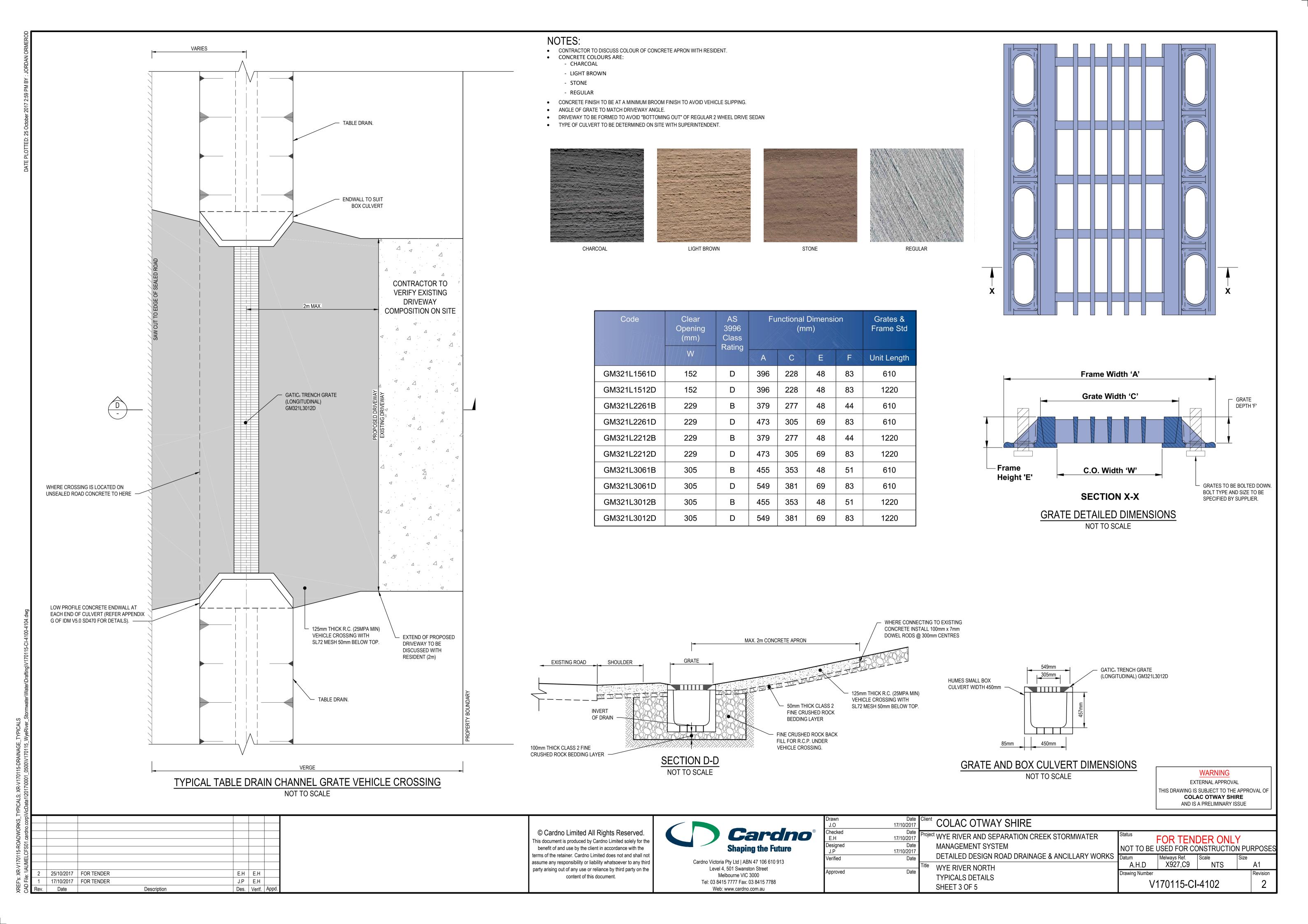
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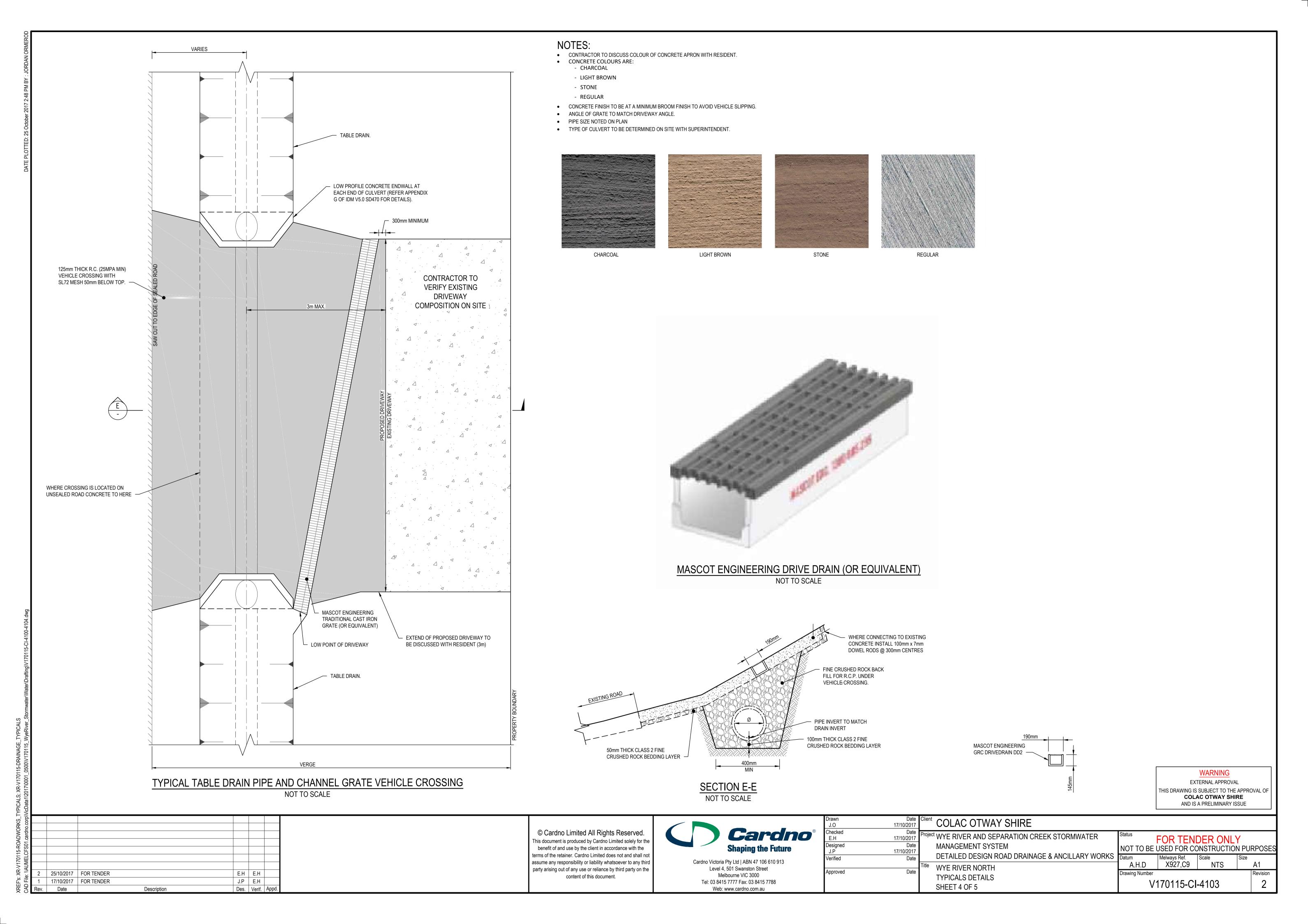
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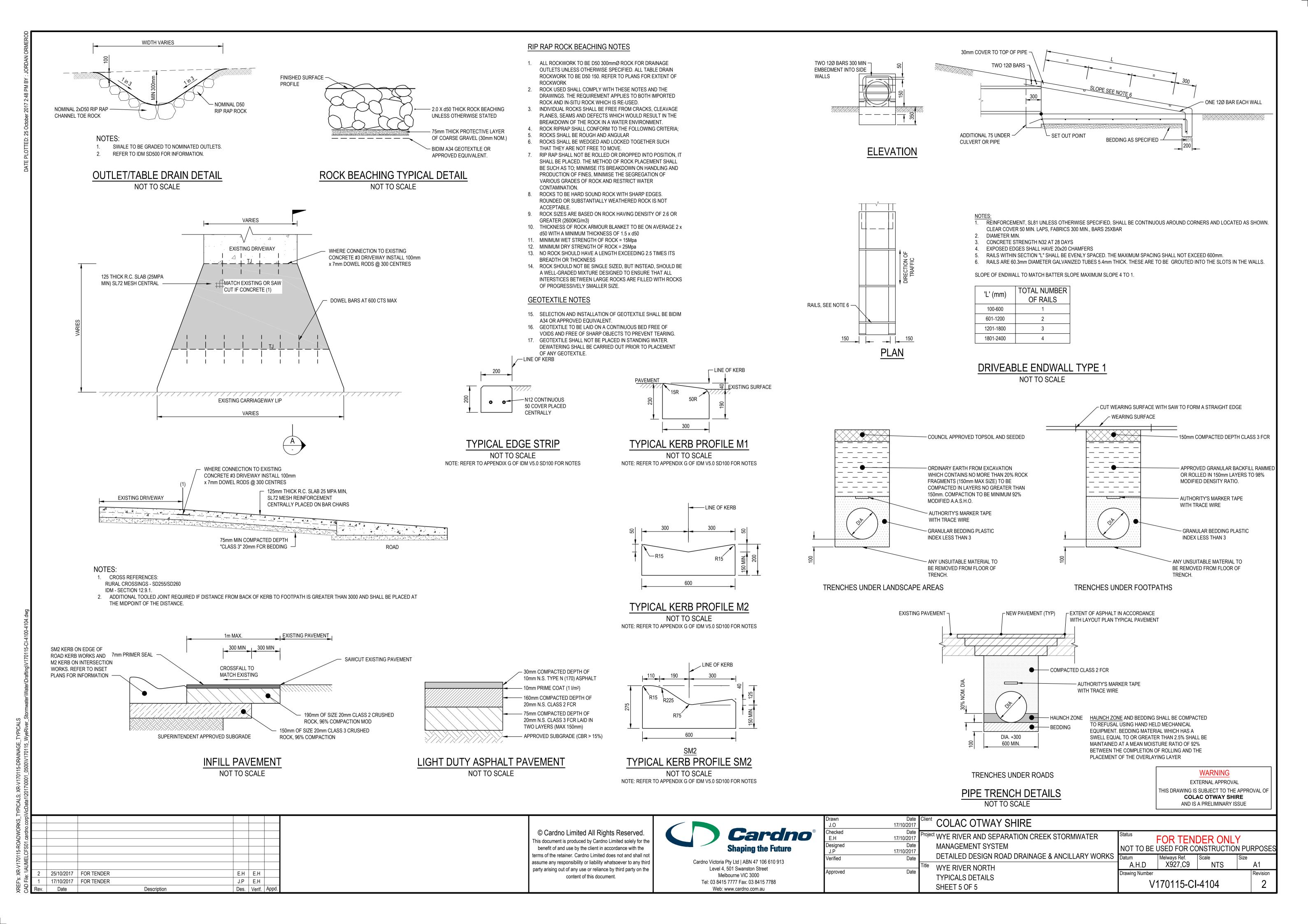
Project WYE RIVER AND SEPARATION CREEK STORMWAT
MANAGEMENT SYSTEM
DETAILED DESIGN ROAD DRAINAGE & ANCILLARY
Title WYE RIVER NORTH
TYPICALS DETAILS

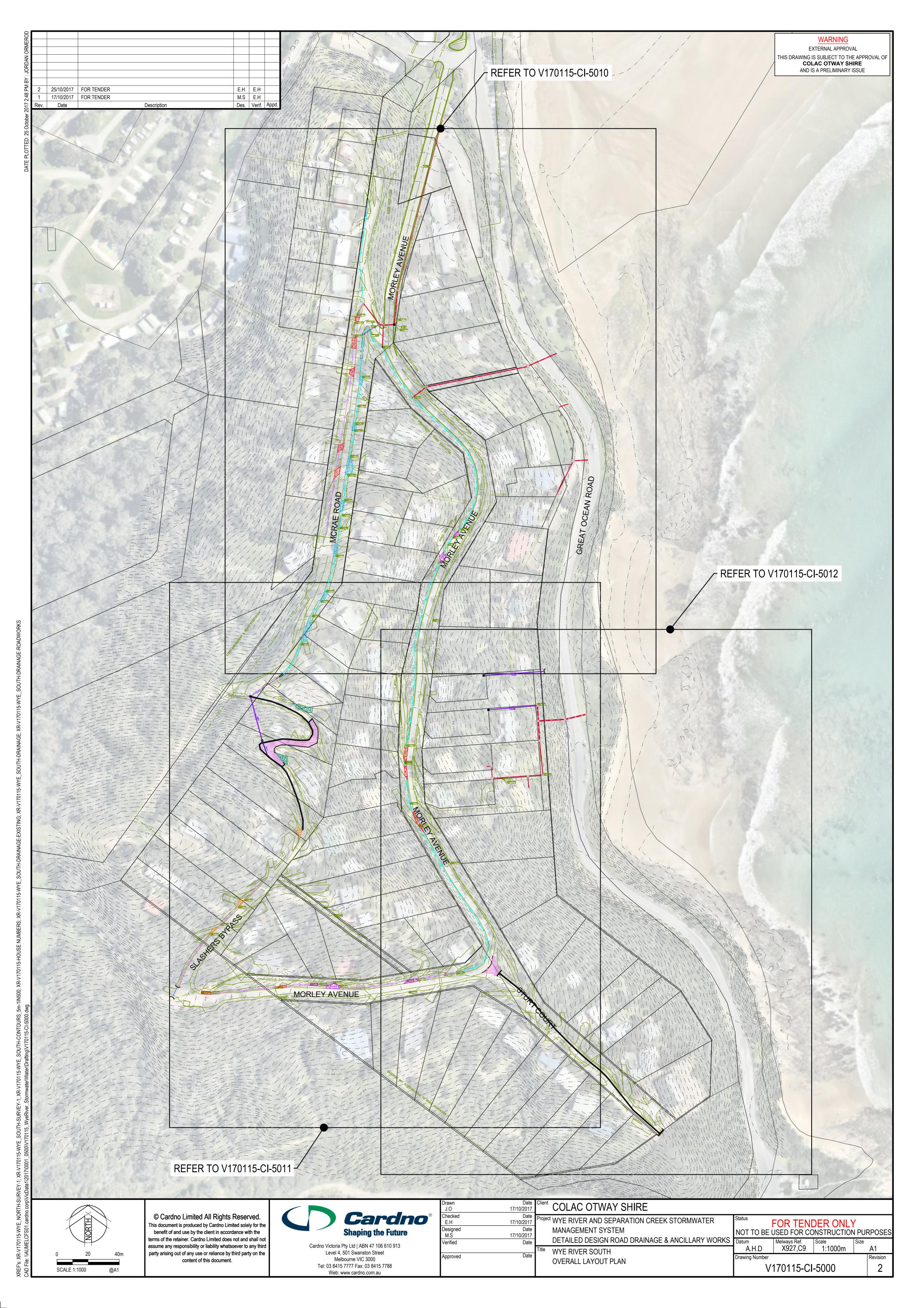
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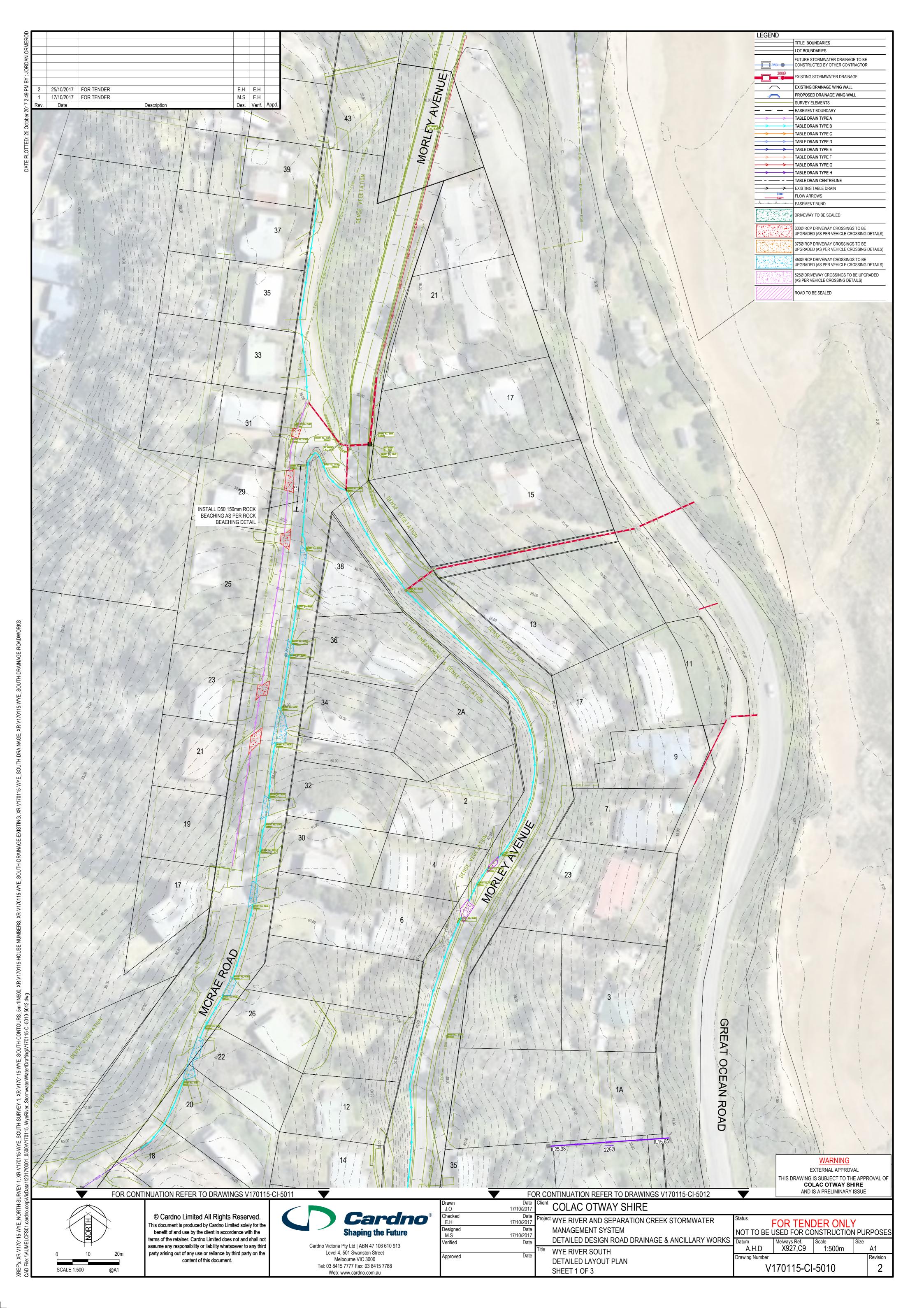
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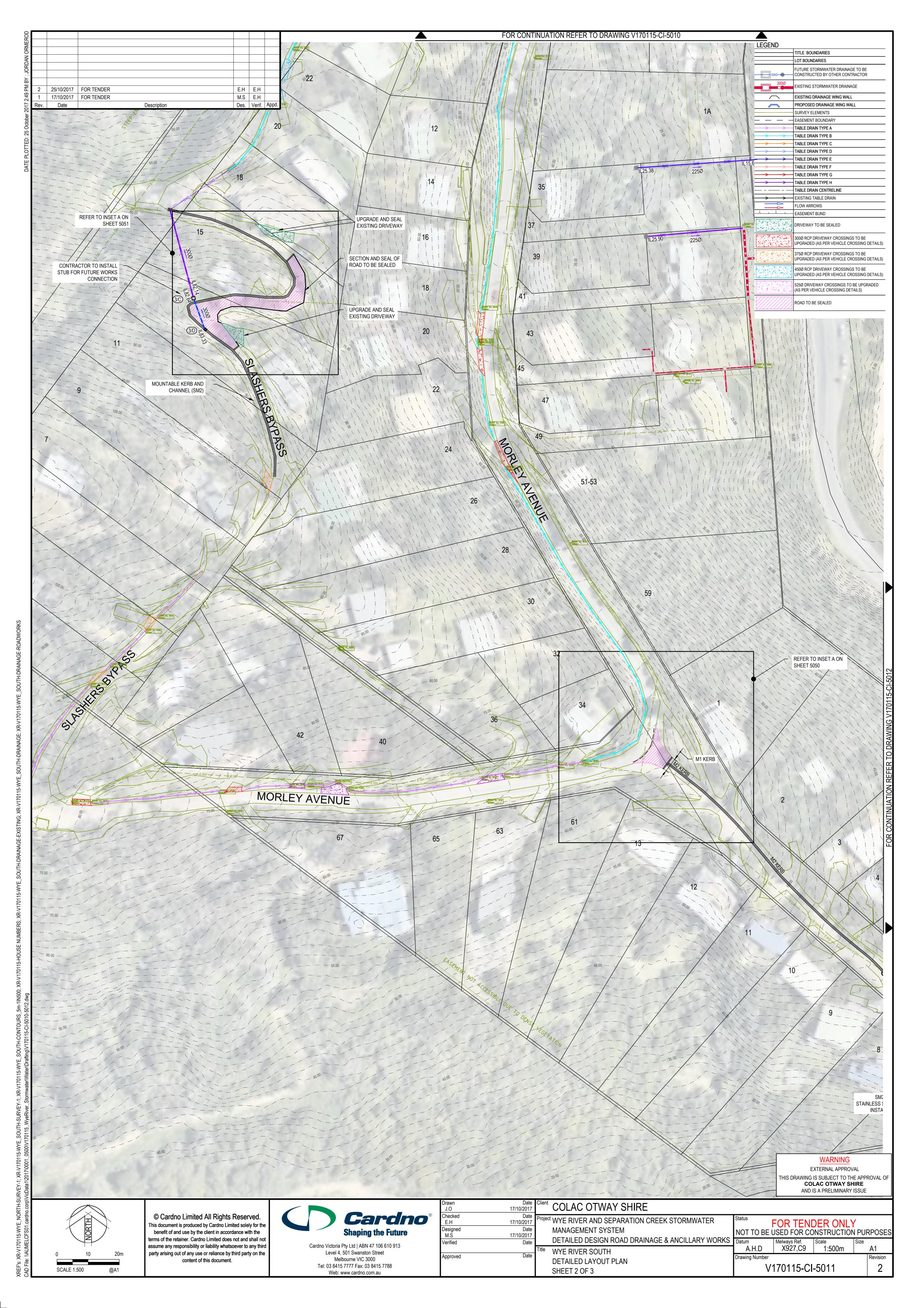


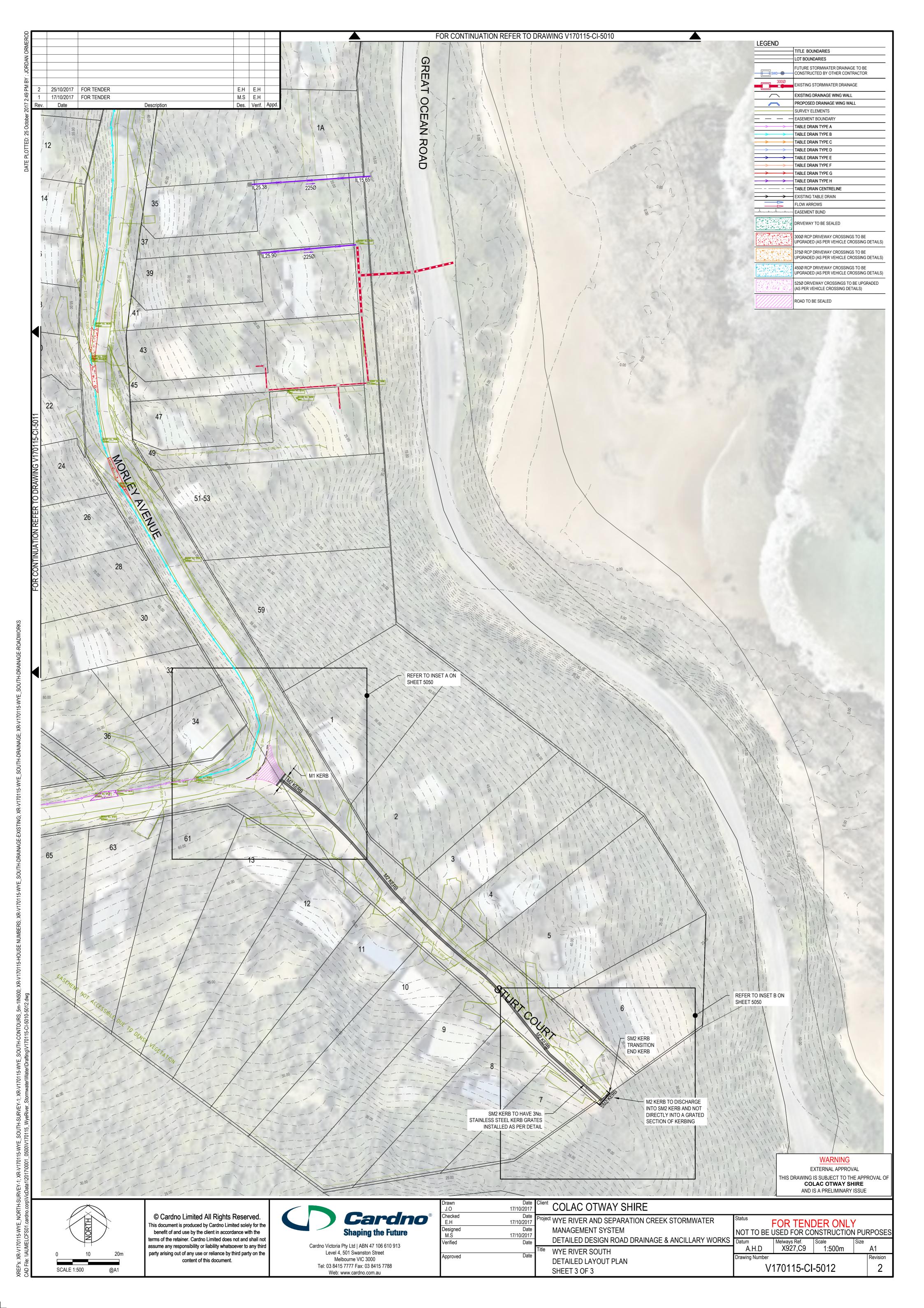


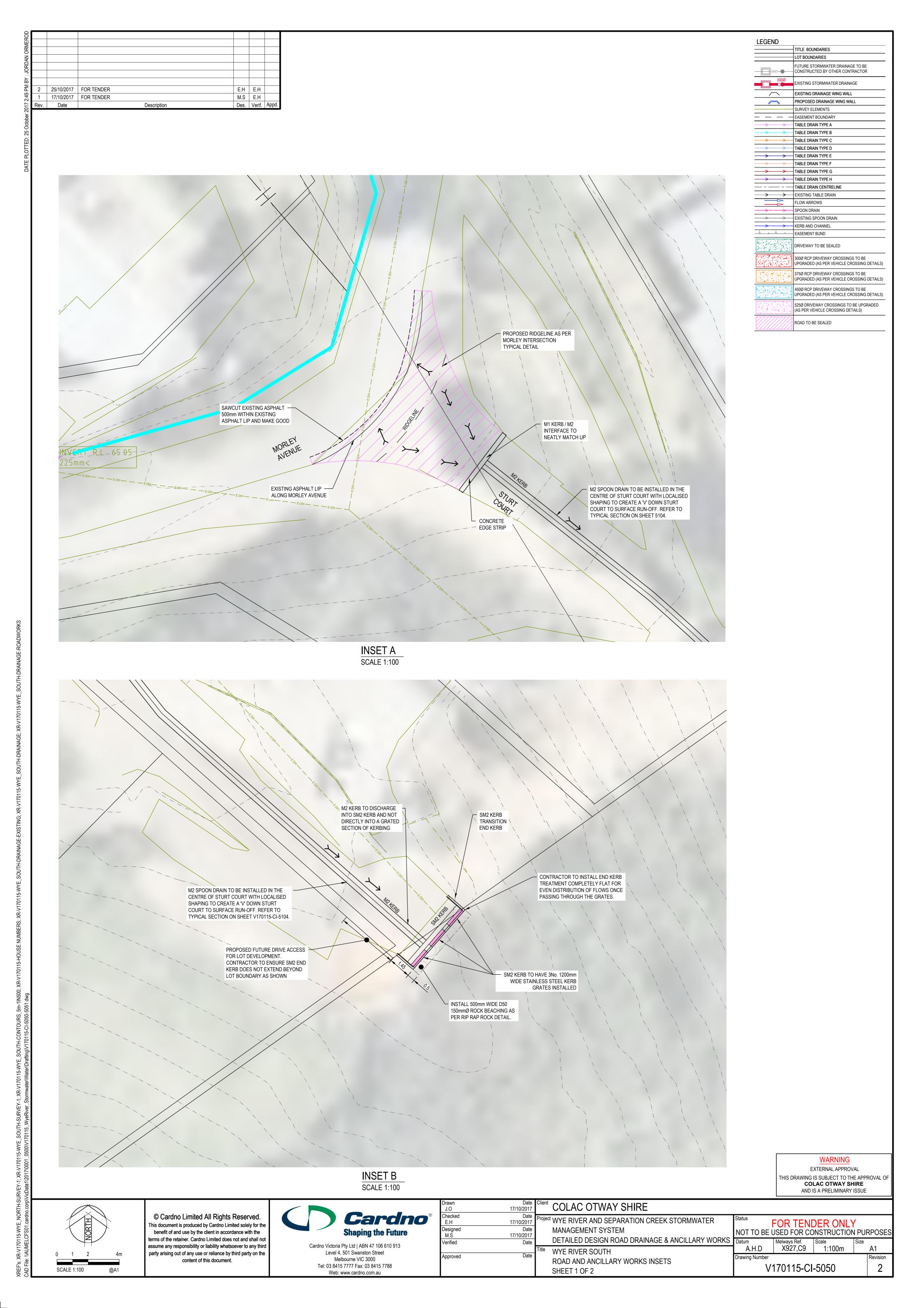


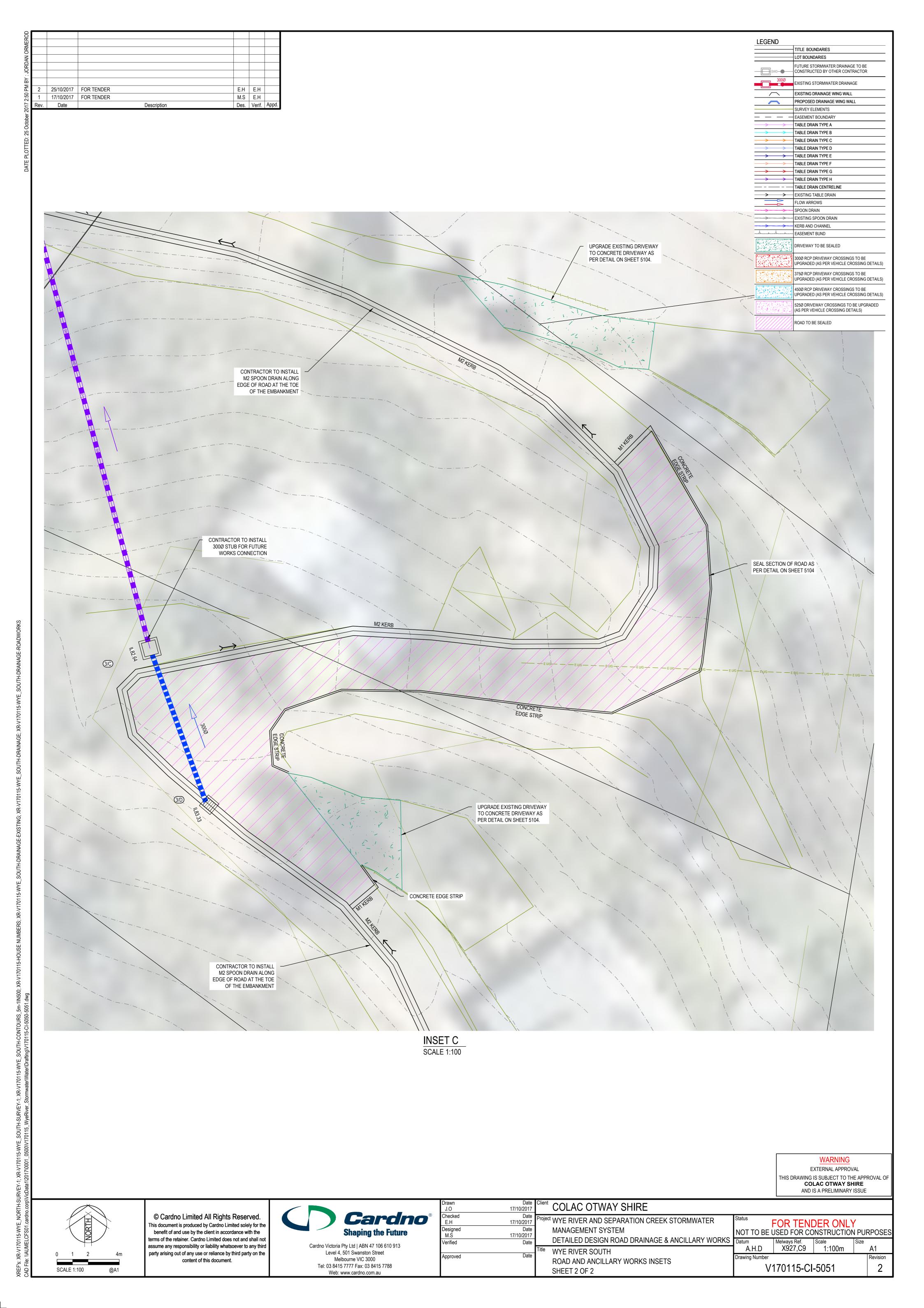


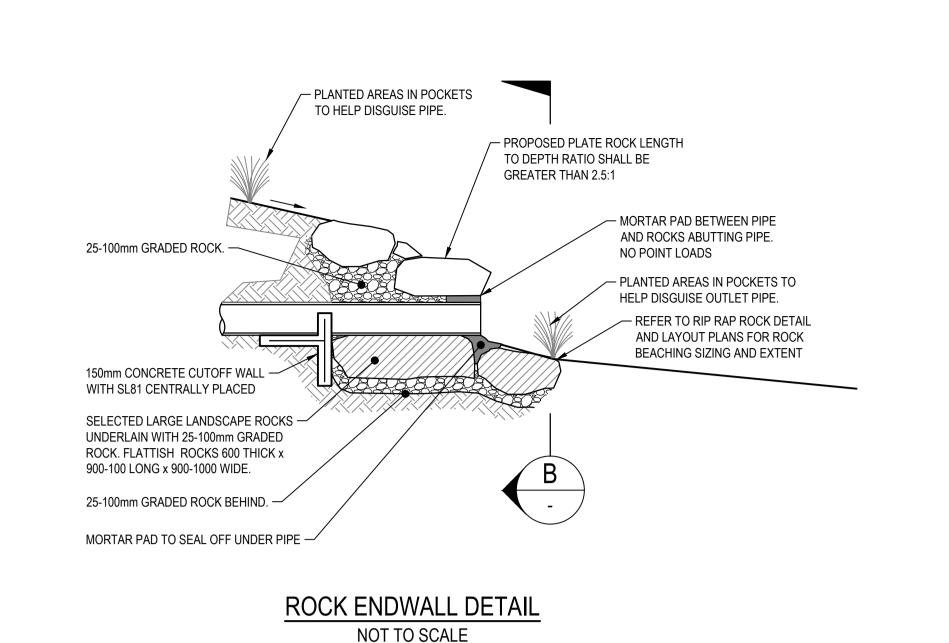


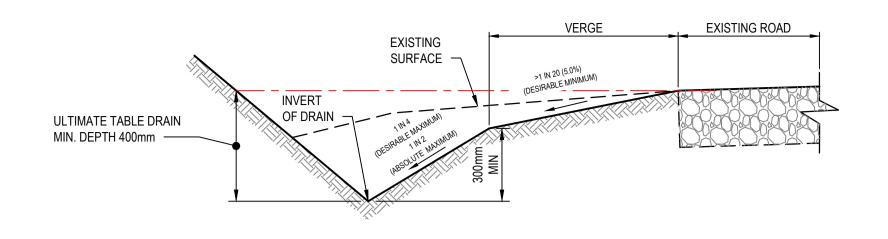




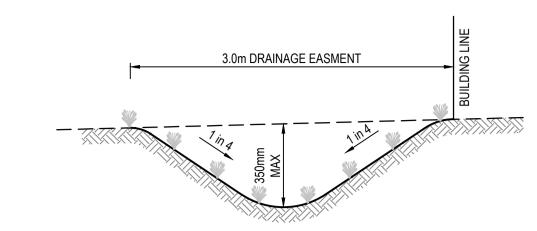






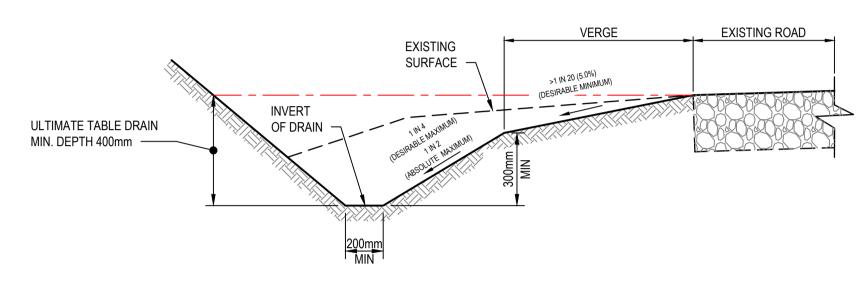


# TYPICAL TABLE DRAIN (TYPE-A) NOT TO SCALE

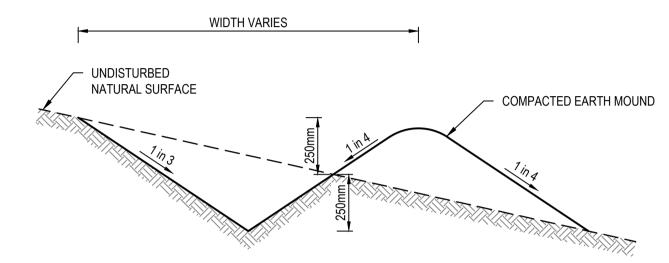


EASMENT CATCH DRAIN DETAIL (TYPE-E)

NOT TO SCALE NOTE: DRAINS TO BE GRADED TO NOMINATED OUTLETS. FINISH WITH 100mm TOPSOIL

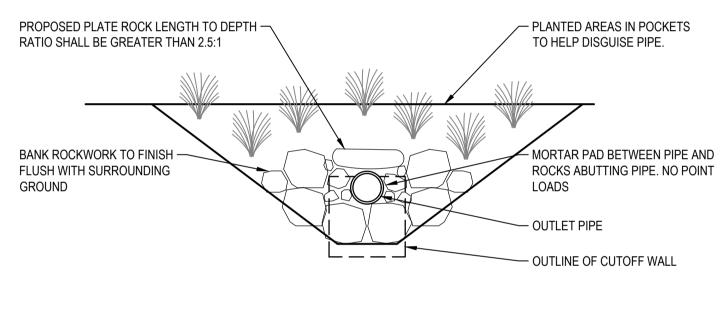


TYPICAL TABLE DRAIN (TYPE-B) NOT TO SCALE



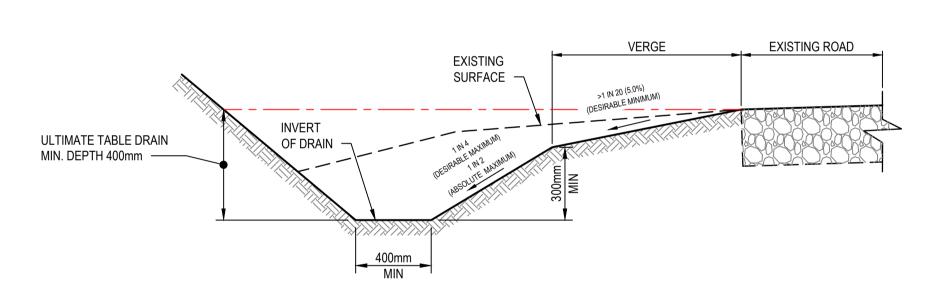
TYPICAL MOUNDED CATCH DRAIN( TYPE-F)

NOT TO SCALE NOTE: DRAINS TO BE GRADED TO NOMINATED OUTLETS. FINISH WITH 100mm TOPSOIL

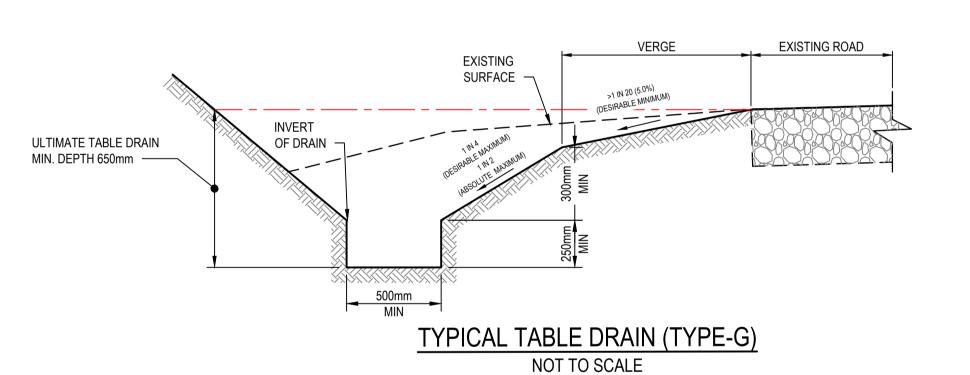


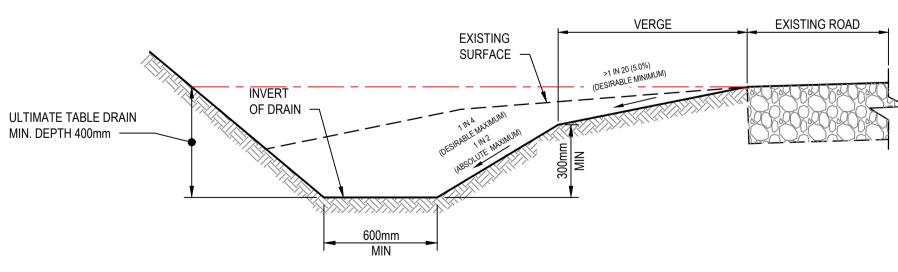
REFER TO MW STANDARD DRAWING 7251/8/105



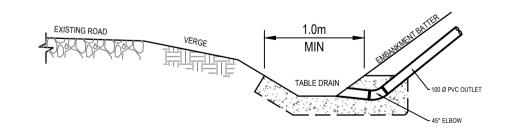


TYPICAL TABLE DRAIN (TYPE-C) NOT TO SCALE





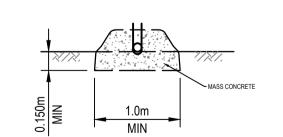
TYPICAL TABLE DRAIN (TYPE-D) NOT TO SCALE



TYPICALS DETAILS

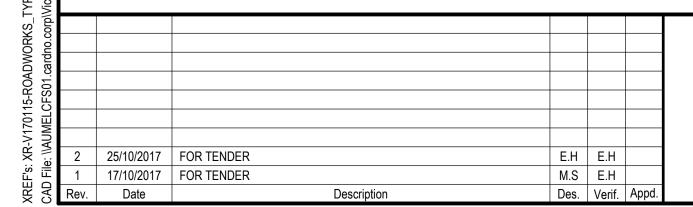
SHEET 1 OF 6

HOUSE OUTLETS INTO TABLE DRAIN NOT TO SCALE



**ELEVATION** NOT TO SCALE

<u>WARNING</u>
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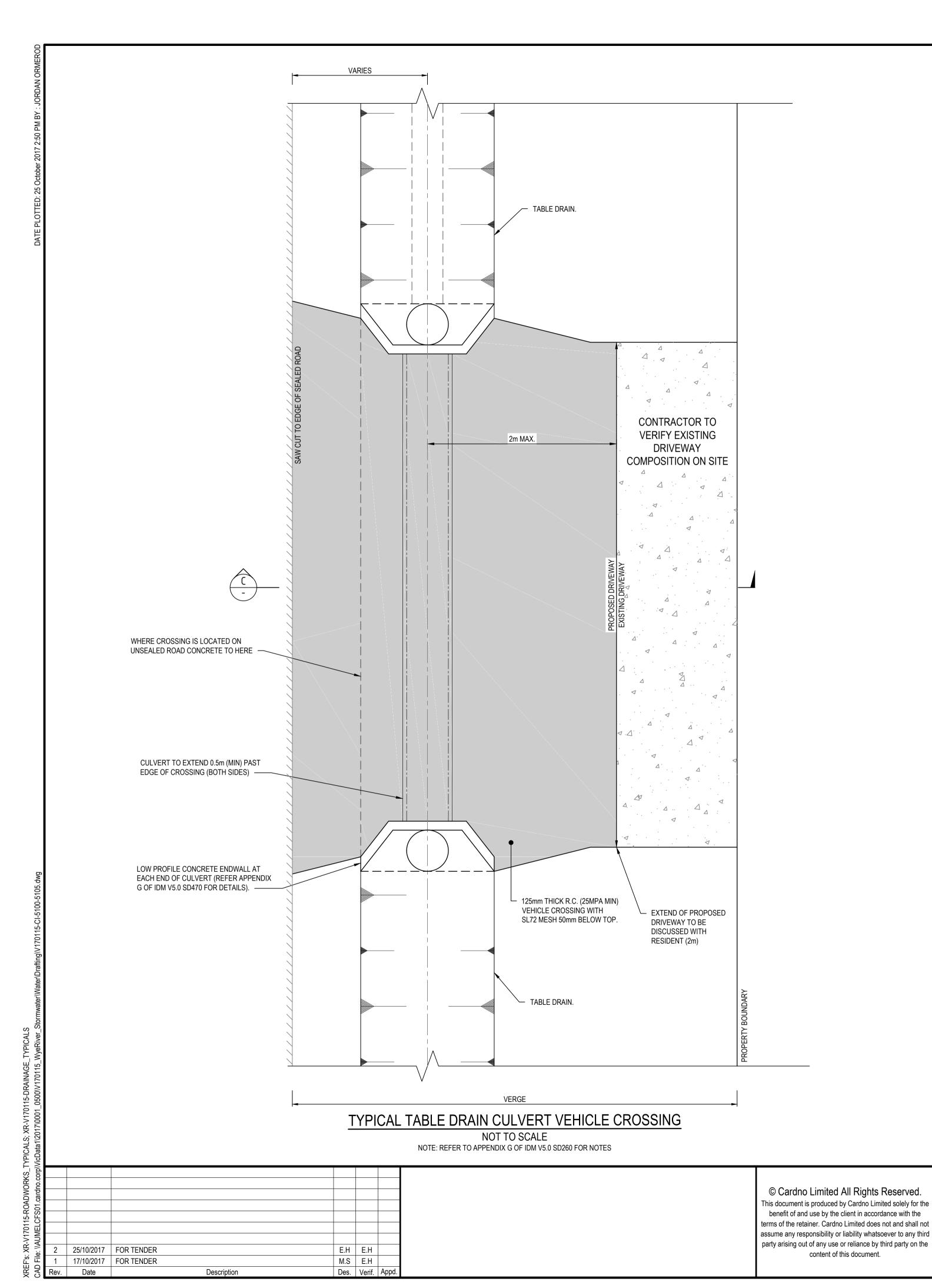


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R	Checked	Date
	E.H	17/10/2017
	Designed	Date
	M.Š	17/10/2017
	Verified	Date
	Approved	Date

Client	COLAC OTWAY SHIRE
Project	WYE RIVER AND SEPARATION CREEK STORMWATER
	MANAGEMENT SYSTEM
	DETAILED DESIGN ROAD DRAINAGE & ANCILLARY WORKS
Title	WYE RIVER SOUTH

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# NOTES:

- CONTRACTOR TO DISCUSS COLOUR OF CONCRETE APRON WITH RESIDENT.
- CONCRETE COLOURS ARE:
   CHARCOAL
  - LIGHT BROWN
  - STONEREGULAR
- CONCRETE FINISH TO BE AT A MINIMUM BROOM FINISH TO IMPROVE SKID RESISTANCE.
- PIPE SIZE NOTED ON PLAN
- TYPE OF CULVERT TO BE DETERMINED ON SITE WITH SUPERINTENDENT.



CHARCOAL







REGULAR

MAX. 2m CONCRETE APRON

WHERE CONNECTING TO EXISTING CONCRETE INSTALL 100mm x 7mm DOWEL RODS @ 300mm CENTRES SL72 MESH 50mm BELOW TOP.

50mm THICK CLASS 2 FINE CRUSHED ROCK BEDDING LAYER FINE CRUSHED ROCK BEDDING LAYER FINE CRUSHED ROCK BEDDING LAYER CRUSHED ROCK BEDDING LAYER FINE CRUSHED ROCK BEDDING LAYER CRUSHED ROCK BEDDING LAYER

SECTION C-C
NOT TO SCALE

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Cardno Shaping the Future

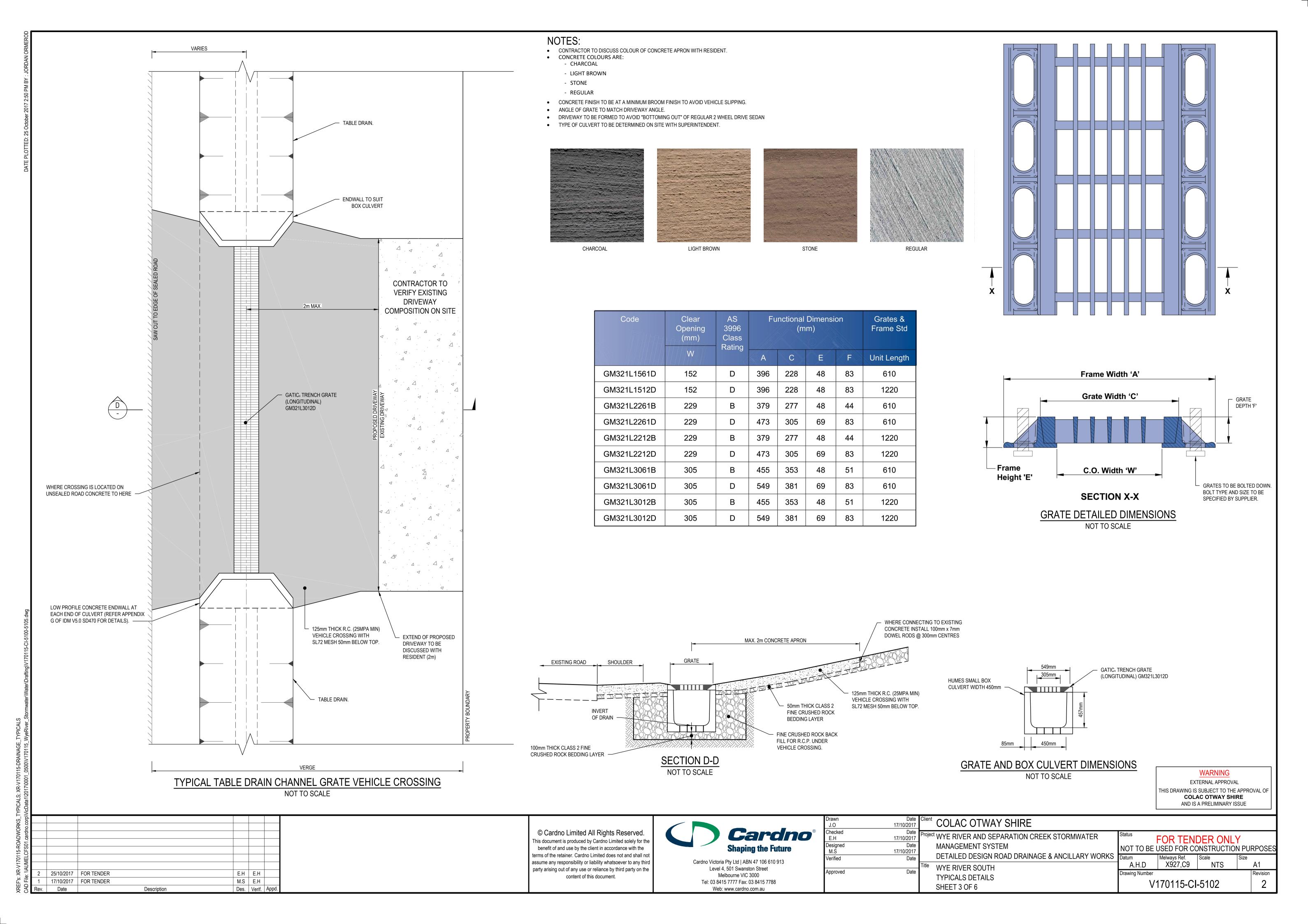
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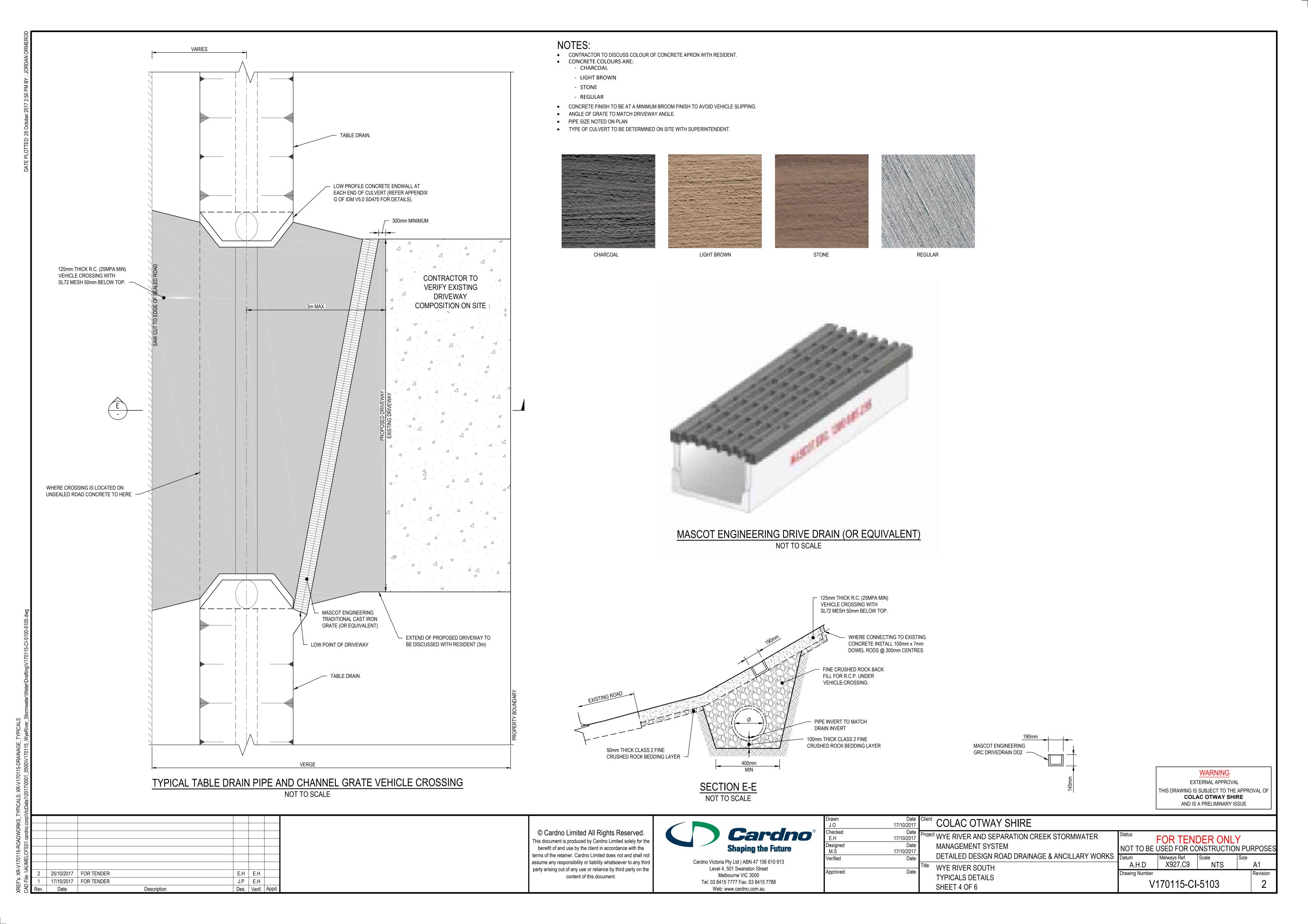
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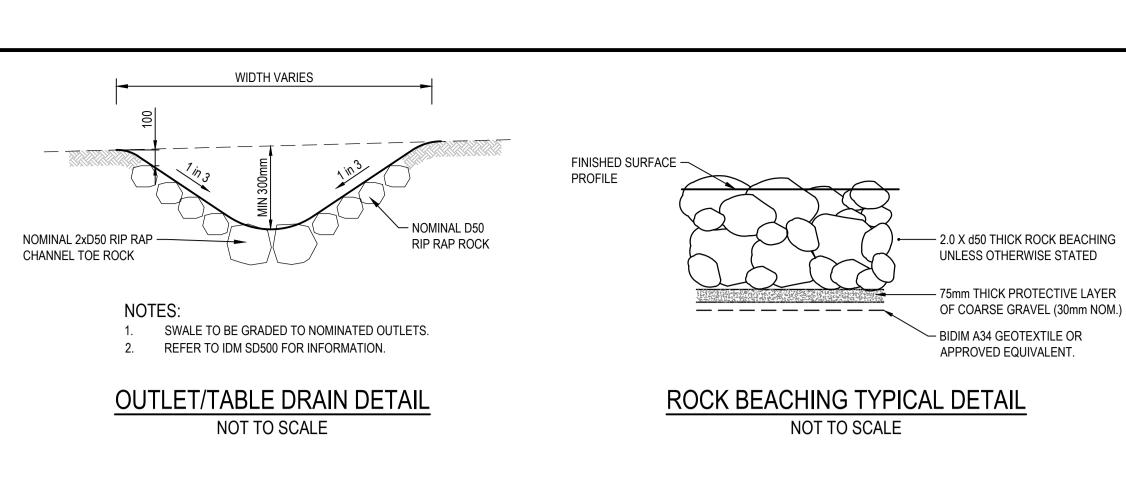
Project WYE RIVER AND SEPARATION CREEK STORMWATER
MANAGEMENT SYSTEM
DETAILED DESIGN ROAD DRAINAGE & ANCILLARY W
Title WYE RIVER SOUTH
TYPICALS DETAILS

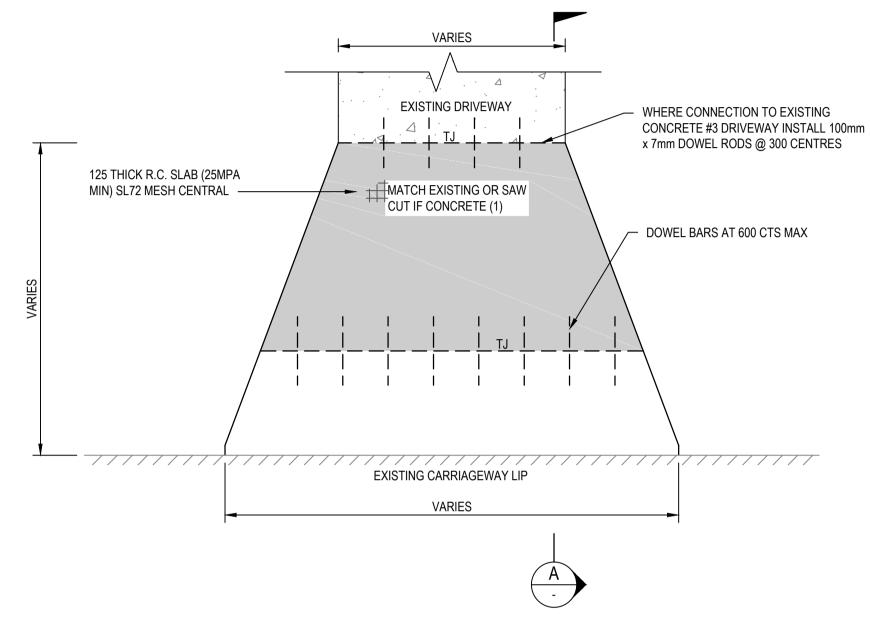
SHEET 2 OF 6

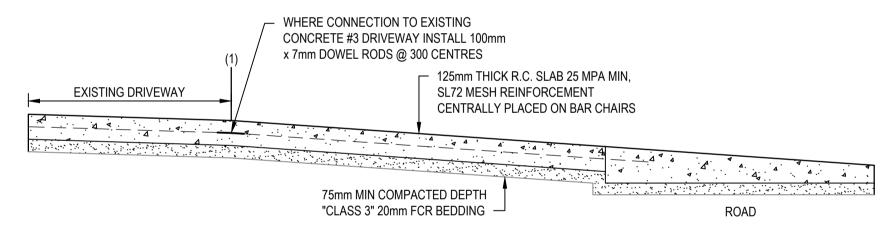
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	Drawing Number				Revision





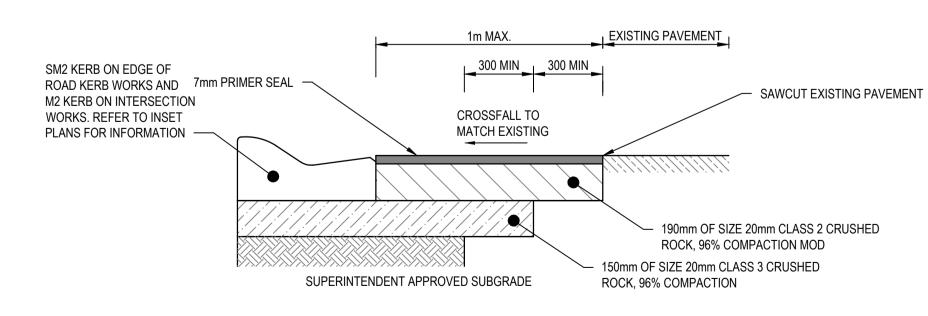






NOTES: CROSS REFERENCES: RURAL CROSSINGS - SD255/SD260

IDM - SECTION 12.9.1. 2. ADDITIONAL TOOLED JOINT REQUIRED IF DISTANCE FROM BACK OF KERB TO FOOTPATH IS GREATER THAN 3000 AND SHALL BE PLACED AT THE MIDPOINT OF THE DISTANCE.

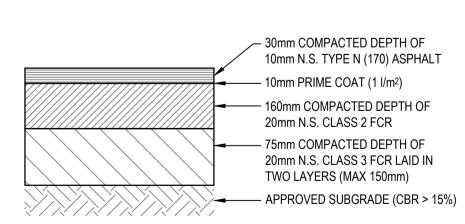


E.H E.H

J.P E.H

Des. | Verif. | Appd.

INFILL PAVEMENT NOT TO SCALE



LIGHT DUTY ASPHALT PAVEMENT NOT TO SCALE

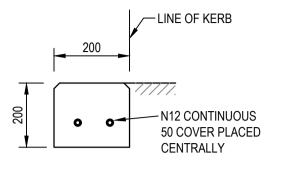
#### RIP RAP ROCK BEACHING NOTES

- 1. ALL ROCKWORK TO BE D50 300mmØ ROCK FOR DRAINAGE OUTLETS UNLESS OTHERWISE SPECIFIED. ALL TABLE DRAIN ROCKWORK TO BE D50 150. REFER TO PLANS FOR EXTENT OF ROCKWORK
- 2. ROCK USED SHALL COMPLY WITH THESE NOTES AND THE DRAWINGS. THE REQUIREMENT APPLIES TO BOTH IMPORTED ROCK AND IN-SITU ROCK WHICH IS RE-USED.
- 3. INDIVIDUAL ROCKS SHALL BE FREE FROM CRACKS, CLEAVAGE PLANES, SEAMS AND DEFECTS WHICH WOULD RESULT IN THE
- BREAKDOWN OF THE ROCK IN A WATER ENVIRONMENT. ROCK RIPRAP SHALL CONFORM TO THE FOLLOWING CRITERIA;
- ROCKS SHALL BE ROUGH AND ANGULAR ROCKS SHALL BE WEDGED AND LOCKED TOGETHER SUCH
- THAT THEY ARE NOT FREE TO MOVE. RIP RAP SHALL NOT BE ROLLED OR DROPPED INTO POSITION, IT SHALL BE PLACED. THE METHOD OF ROCK PLACEMENT SHALL BE SUCH AS TO: MINIMISE ITS BREAKDOWN ON HANDLING AND PRODUCTION OF FINES, MINIMISE THE SEGREGATION OF VARIOUS GRADES OF ROCK AND RESTRICT WATER
- CONTAMINATION. 8. ROCKS TO BE HARD SOUND ROCK WITH SHARP EDGES. ROUNDED OR SUBSTANTIALLY WEATHERED ROCK IS NOT
- ACCEPTABLE. ROCK SIZES ARE BASED ON ROCK HAVING DENSITY OF 2.6 OR
- GREATER (2600KG/m3) 10. THICKNESS OF ROCK ARMOUR BLANKET TO BE ON AVERAGE 2 x
- d50 WITH A MINIMUM THICKNESS OF 1.5 x d50 11. MINIMUM WET STRENGTH OF ROCK = 15Mpa
- 12. MINIMUM DRY STRENGTH OF ROCK = 25Mpa 13. NO ROCK SHOULD HAVE A LENGTH EXCEEDING 2.5 TIMES ITS BREADTH OR THICKNESS
- 14. ROCK SHOULD NOT BE SINGLE SIZED, BUT INSTEAD, SHOULD BE A WELL-GRADED MIXTURE DESIGNED TO ENSURE THAT ALL INTERSTICES BETWEEN LARGE ROCKS ARE FILLED WITH ROCKS OF PROGRESSIVELY SMALLER SIZE.

#### GEOTEXTILE NOTES

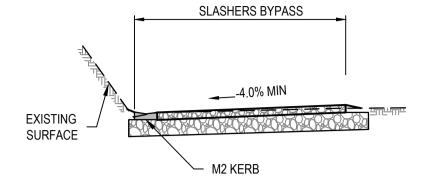
- 15. SELECTION AND INSTALLATION OF GEOTEXTILE SHALL BE BIDIM
- A34 OR APPROVED EQUIVALENT. 16. GEOTEXTILE TO BE LAID ON A CONTINUOUS BED FREE OF
- VOIDS AND FREE OF SHARP OBJECTS TO PREVENT TEARING. 17. GEOTEXTILE SHALL NOT BE PLACED IN STANDING WATER. DEWATERING SHALL BE CARRIED OUT PRIOR TO PLACEMENT OF ANY GEOTEXTILE.

RIP RAP ROCK BEACHING					
RIP RAP	DIAMETER	DIAMETER	LENGTH (m)		
LOCATION	RATIO	(mm)	LENOTH (III)		
MCRAE ROAD	D50	150	20.0		
6/A	D50	150	2.0		
4/A	D50	150	1.6		

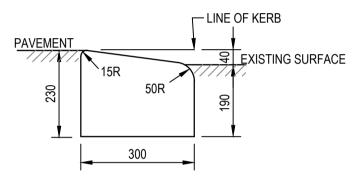


# TYPICAL EDGE STRIP

NOT TO SCALE NOTE: REFER TO APPENDIX G OF IDM V5.0 SD100 FOR NOTES

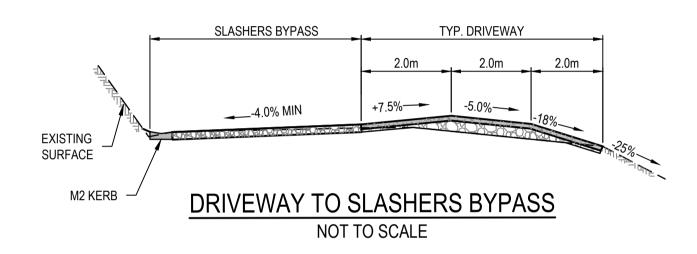


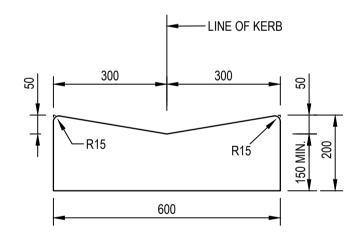
**SLASHERS BYPASS** NOT TO SCALE



# TYPICAL KERB PROFILE M1

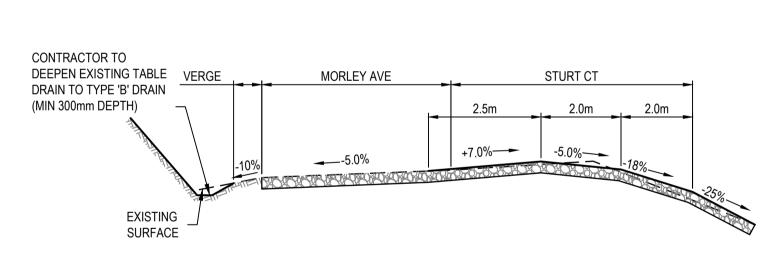
NOT TO SCALE NOTE: REFER TO APPENDIX G OF IDM V5.0 SD100 FOR NOTES



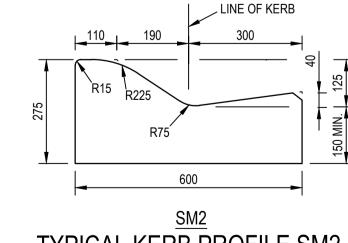


# TYPICAL KERB PROFILE M2

NOT TO SCALE NOTE: REFER TO APPENDIX G OF IDM V5.0 SD100 FOR NOTES



MORLEY AVE & STURT CT INTERSECTION NOT TO SCALE



TYPICAL KERB PROFILE SM2 NOT TO SCALE NOTE: REFER TO APPENDIX G OF IDM V5.0 SD100 FOR NOTES

17/10/2017

17/10/2017

Date

TYPICALS DETAILS

SHEET 5 OF 6

ROAD RESERVE STURT COURT \_\_\_\_-4.0% MIN -4.0% MIN\_\_\_\_ M2 KERB STURT COURT WARNING EXTERNAL APPROVAL NOT TO SCALE THIS DRAWING IS SUBJECT TO THE APPROVAL OF

**COLAC OTWAY SHIRE** Project WYE RIVER AND SEPARATION CREEK STORMWATER

	FOR TENDER ONLY NOT TO BE USED FOR CONSTRUCTION PURPOS				
DETAILED DESIGN ROAD DRAINAGE & ANCILLARY WORKS		Melways Ref.	Scale	Size	
WYE RIVER SOUTH	A.H.D	X927,C9	NTS		A1
	Drawing Number				Revision

V170115-CI-5104

**COLAC OTWAY SHIRE** AND IS A PRELIMINARY ISSUE

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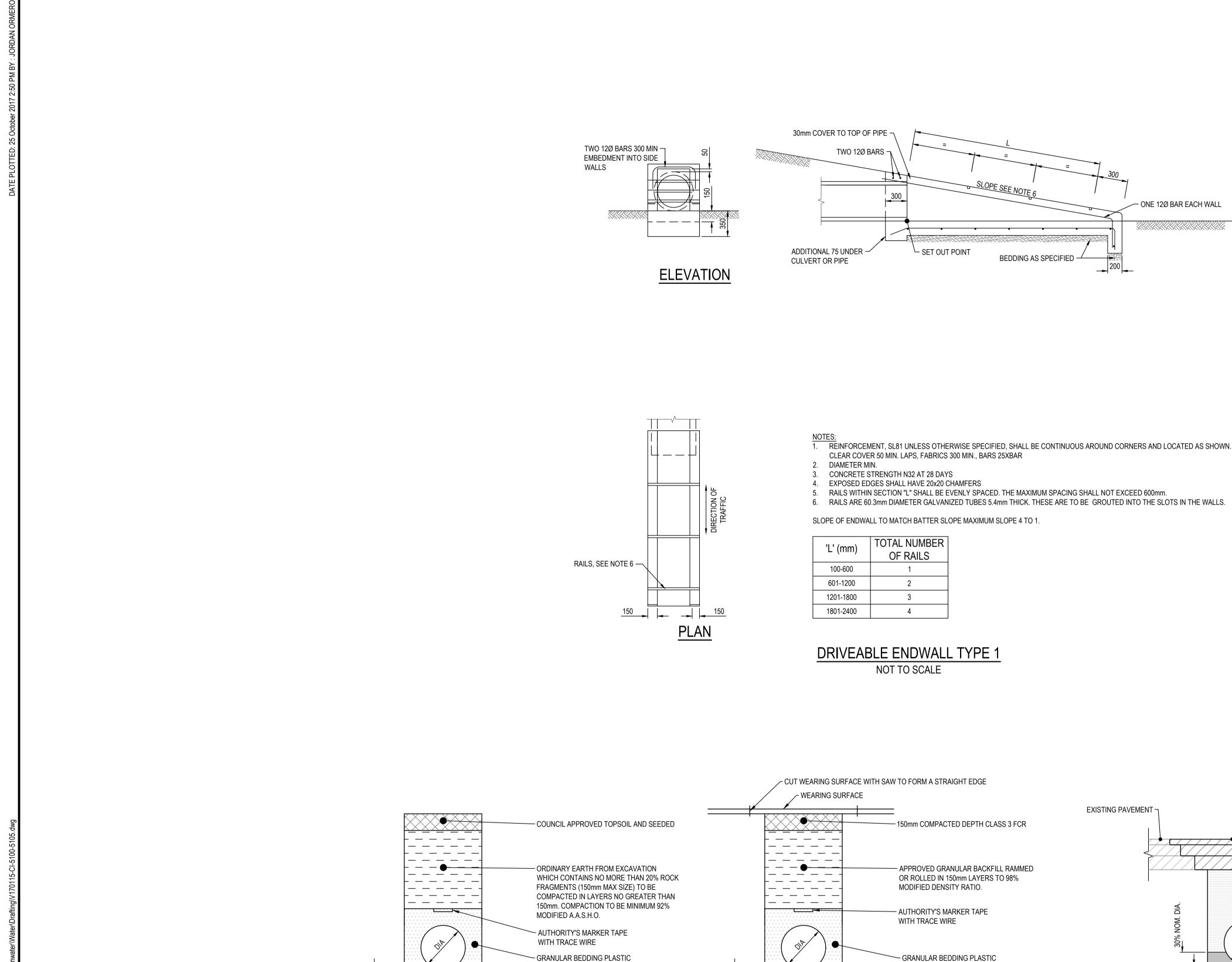
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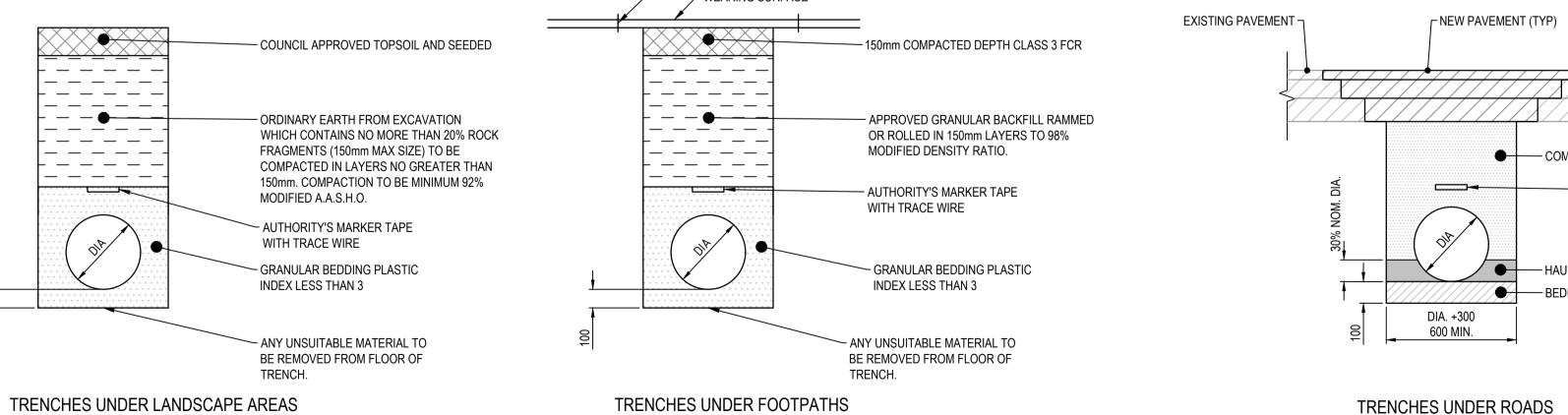
Description

17/10/2017

Date

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# PIPE TRENCH DETAILS NOT TO SCALE

TRENCHES UNDER ROADS

WARNING EXTERNAL APPROVAL THIS DRAWING IS SUBJECT TO THE APPROVAL OF **COLAC OTWAY SHIRE** AND IS A PRELIMINARY ISSUE

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1	17/10/2017	FOR TENDER	J.P	E.H	
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T Date	Title WYE RIVER SOUTH TYPICALS DETAILS
Date 17/10/2017 Date	MANAGEMENT SYSTEM DETAILED DESIGN ROAD DRAINAGE & ANCILLARY WOR  Title WYE RIVER SOUTH

EXTENT OF ASPHALT IN ACCORDANCE WITH LAYOUT PLAN TYPICAL PAVEMENT

— AUTHORITY'S MARKER TAPE

- HAUNCH ZONE HAUNCH ZONE AND BEDDING SHALL BE COMPACTED

TO REFUSAL USING HAND HELD MECHANICAL EQUIPMENT. BEDDING MATERIAL WHICH HAS A

PLACEMENT OF THE OVERLAYING LAYER

SWELL EQUAL TO OR GREATER THAN 2.5% SHALL BE

MAINTAINED AT A MEAN MOISTURE RATIO OF 92%

BETWEEN THE COMPLETION OF ROLLING AND THE

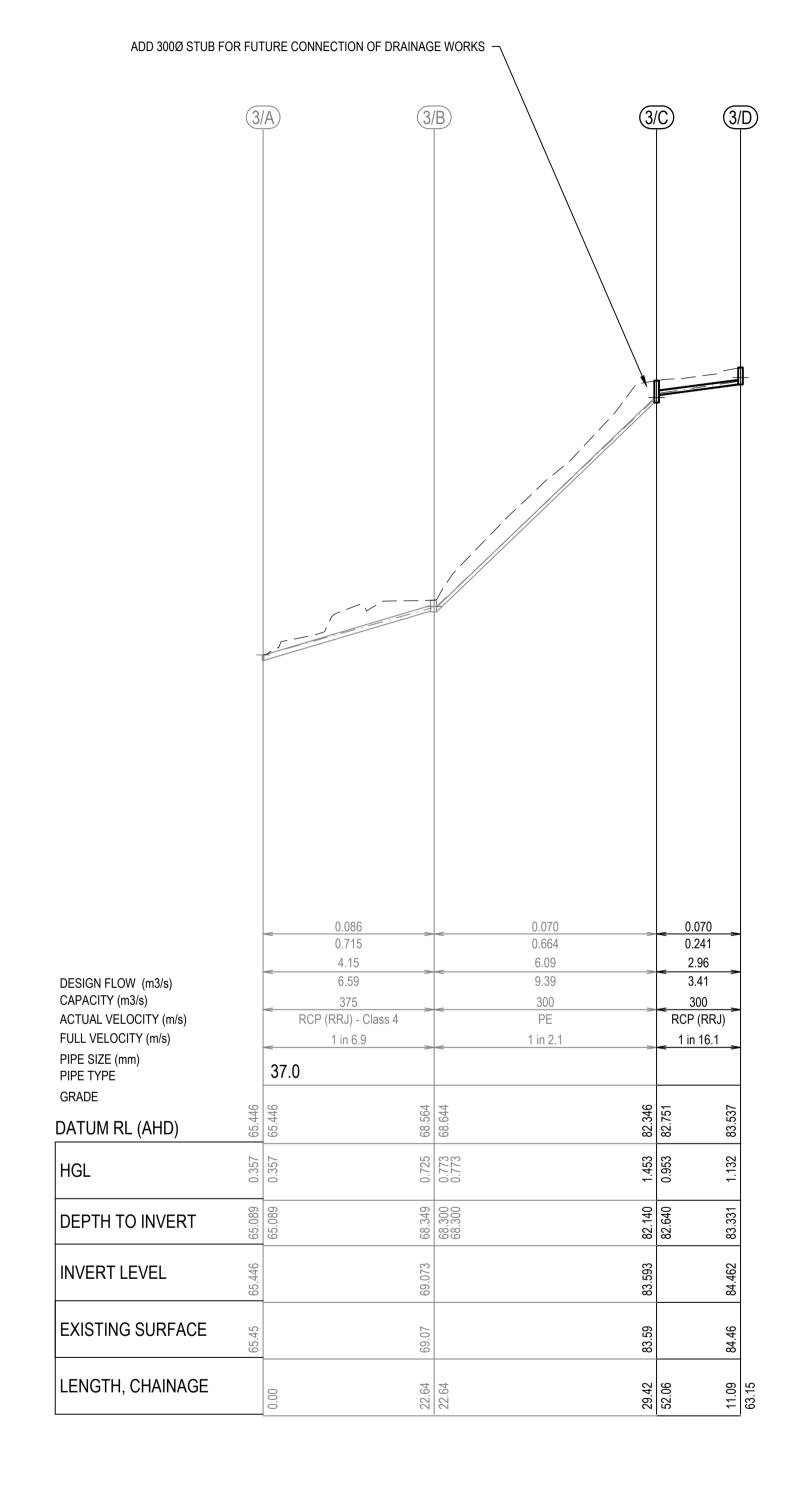
WITH TRACE WIRE

COMPACTED CLASS 2 FCR

SHEET 6 OF 6

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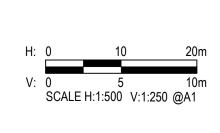
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PIT SCHEDULE															
DIT NO	LOCA	TION	TVDE	INTERNAL		PIT COVER	CLASS (AS	DEDTU		INLET		UTLET	COMMENTS		
PIT NO	EASTING	NORTHING	TYPE	WD	LEN	LEVEL	3996)	3996) DEPTH	DEPIR		DIA	INV LEV	DIA	INV LEV	COMMENTS
3/C	751492.751	5719321.958	JP	900	900	83.593	D	1.45	300	82.640	300	82.140	REFER IDM SD 420		
3/D	751496.546	5719311.533	GEP	600	900	84.462	D	1.13			300	83.331	CLASS D "BICYCLE SAFE" GRATE COVER. REFER IDM SD 481		

- ALL PITS ARE TO BE TO IDM STANDARDS UNLESS NOTED OTHERWISE.
- PITS DEEPER THAN 1.00m SHALL BE FITTED WITH STEPIRONS, FIRST STEPIRON TO BE 300mm FROM THE BOTTOM OF THE PIT.
- COVER LEVELS TO BE SET TO MATCH THE FINISHED SURFACE PROFILES AND ADJACENT CONSTRUCTION. 4. GP = GRATED PIT, GSEP = SIDE ENTRY PIT GRATED, DGSEP = DOUBLE SIDE ENTRY PIT GRATED, SEP = SIDE ENTRY PIT, DSEP = DOUBLE SIDE ENTRY PIT, JP = JUNCTION PIT, EP = END OF PIPE,
- EW = ENDWALL, DEW = DRIVEABLE ENDWALL.
- 5. UNLESS OTHERWISE SPECIFIED, PIT TYPES REFER TO IDM STANDARD DRAWINGS
  - FIGURE SD 405 UNHAUNCHED PITS (450Ø MAX. PIPE)
  - FIGURE SD 410 HAUNCHED PITS (MIN 525Ø PIPE) FIGURE SD 420 JUNCTION PIT IN ROAD RESERVE
  - FIGURE SD 426 JUNCTION PIT WITH NON-CONCRETE COVER (NON TRAFFICABLE AREAS)
  - FIGURE SD 441 GRATED SIDE ENTRY PIT WITH LIGHTWEIGHT COVER & CONCRETE SURROUND FOR 'SM2-M' FIGURE SD 455 DEPRESSED GRATED PIT
  - FIGURE SD 460 INLET CATCH PIT
  - FIGURE SD 465 REINFORCED CONCRETE WINGWALL (IN-SITU)
  - FIGURE SD 470 CONCRETE ENDWALL FOR PIPES UP TO 300mmØ (WALKWAYS, PATHS AND TRACKS)
  - FIGURE SD 480 GRATED PIT FOR SM2 MODIFIED KERB & CHANNEL FIGURE SD 481 ALTERNATE GRATED PIT FOR SM2 MODIFIED KERB & CHANNEL 'SM2-M' - UPSTREAM PIT ONLY
- FIGURE SD 496 MODIFIED EXISTING PIT TO GRATED PIT IN VEHICLE CROSSING / LAYBACK FOR HAUNCHED PITS REFER TO IDM STANDARD DRAWING FIGURE SD 410. PITS TO BE HAUNCHED TO COUNCIL STANDARD OPENINGS.
- STUBS AND PIPE ENDS TO BE BLOCKED OFF TO COUNCIL'S SATISFACTION.
- ALL GRATED PITS TO HAVE BICYCLE SAFE LOCKDOWN GRATES.
- 9. ALL GRATED SIDE-ENTRY PITS TO HAVE MIN 100mm THICK CONCRETE APRON BETWEEN GRATE AND ASPHALT. REFER IDM STANDARD DRAWINGS.
- 10. PITS WITHIN ROAD PAVEMENT, VEHICLE CROSSINGS OR WITHIN 0.75m OF A VEHICLE CROSSING, TO HAVE CLASS D CAST IRON LOCK DOWN LIDS, LID INFILL COLOURED TO MATCH ROAD
- 11. ALL PITS WITHIN ROAD TO BE CONSTRUCTED WITH 32 MPa CONCRETE WITH SL92 MESH IN WALLS AND BASE.
- 12. CONTRACTOR TO VERIFY EXISTING SERVICES CONNECTION LEVELS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES MUST BE IMMEDIATELY IDENTIFIED AND THE SUPERINTENDENT NOTIFIED PRIOR TO CONSTRUCTION COMMENCING.

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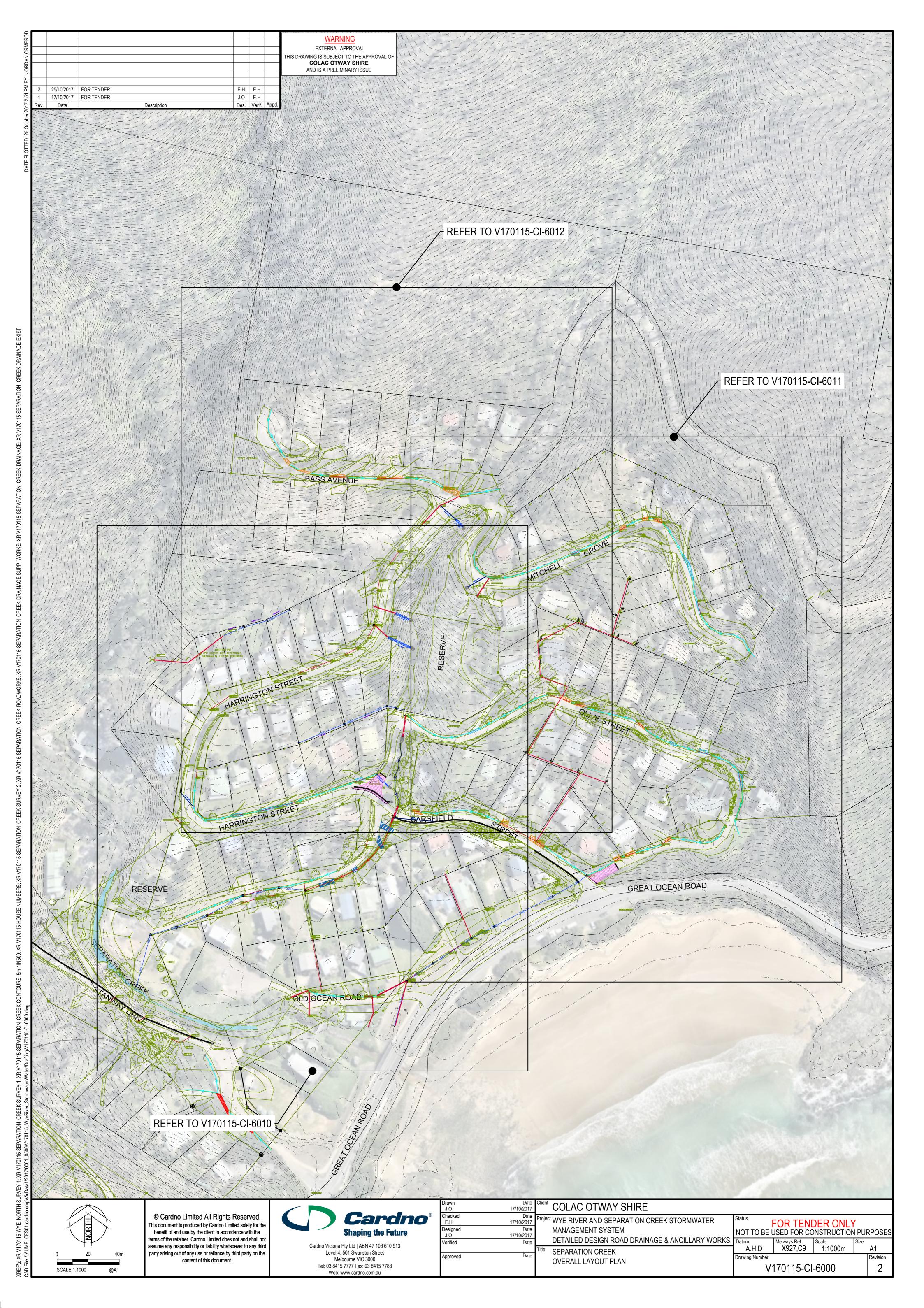
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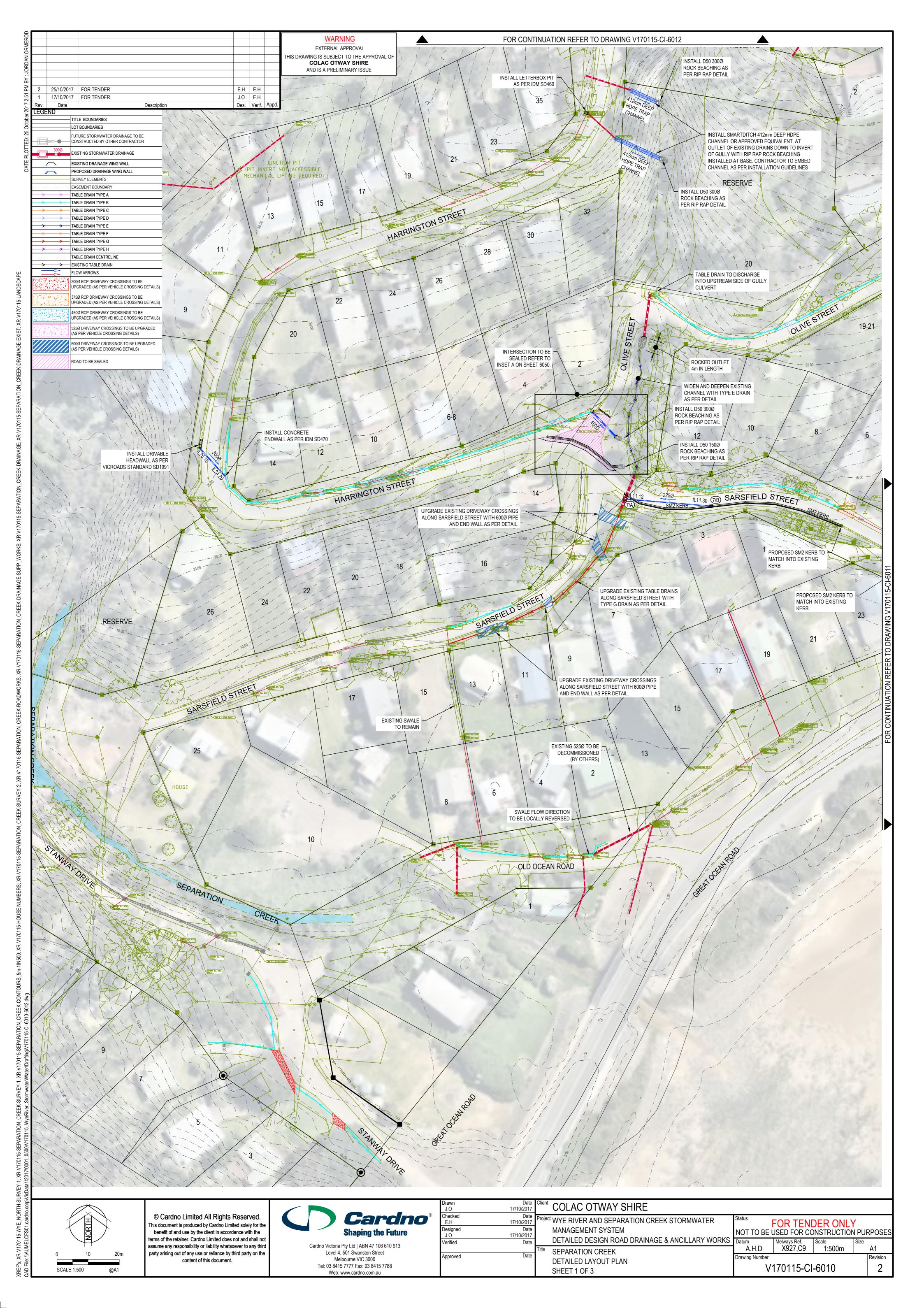
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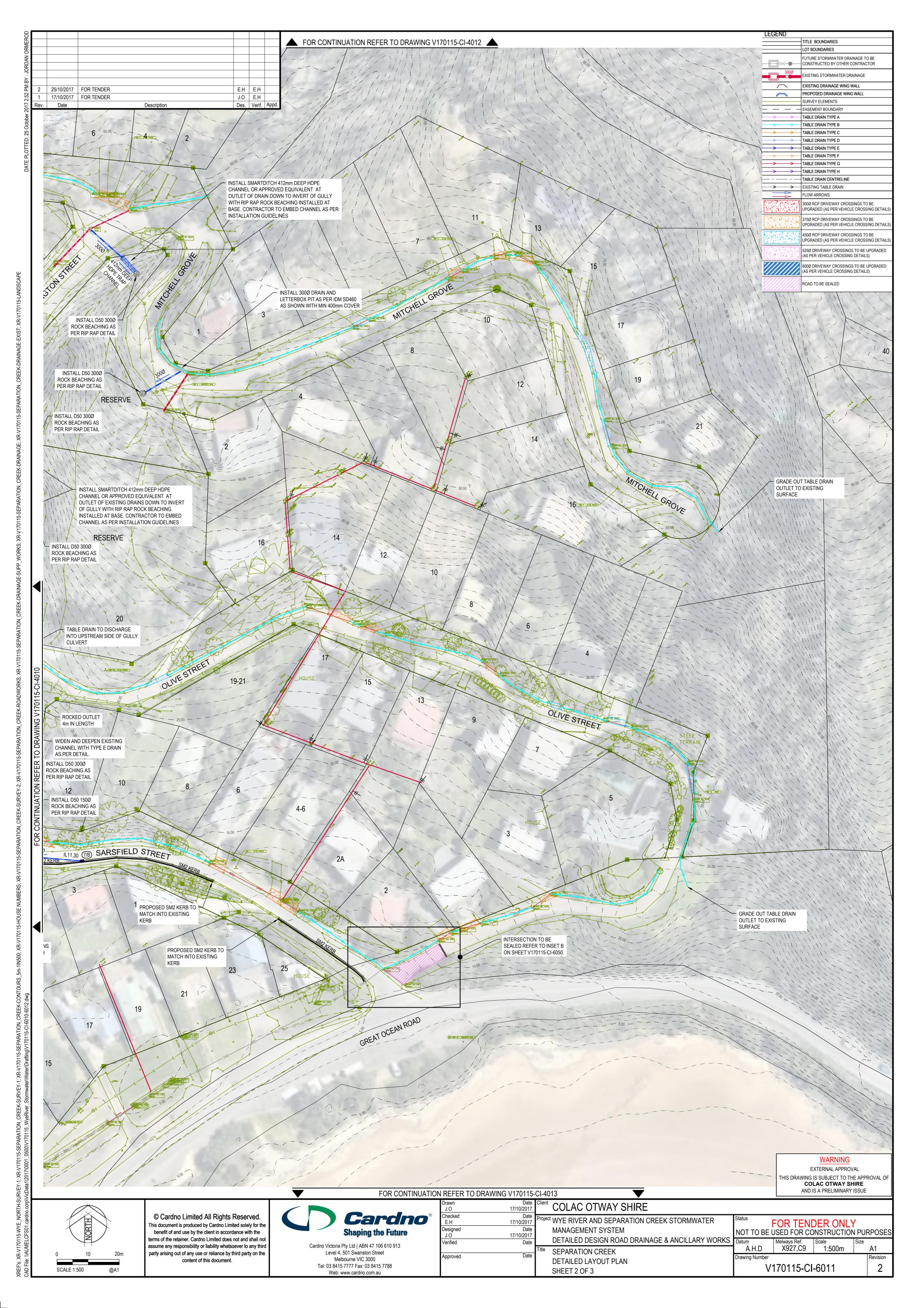
COLAC OTWAY SHIRE Project WYE RIVER AND SEPARATION CREEK STORMWATER MANAGEMENT SYSTEM DETAILED DESIGN ROAD DRAINAGE & ANCILLARY WORKS Title WYE RIVER SOUTH

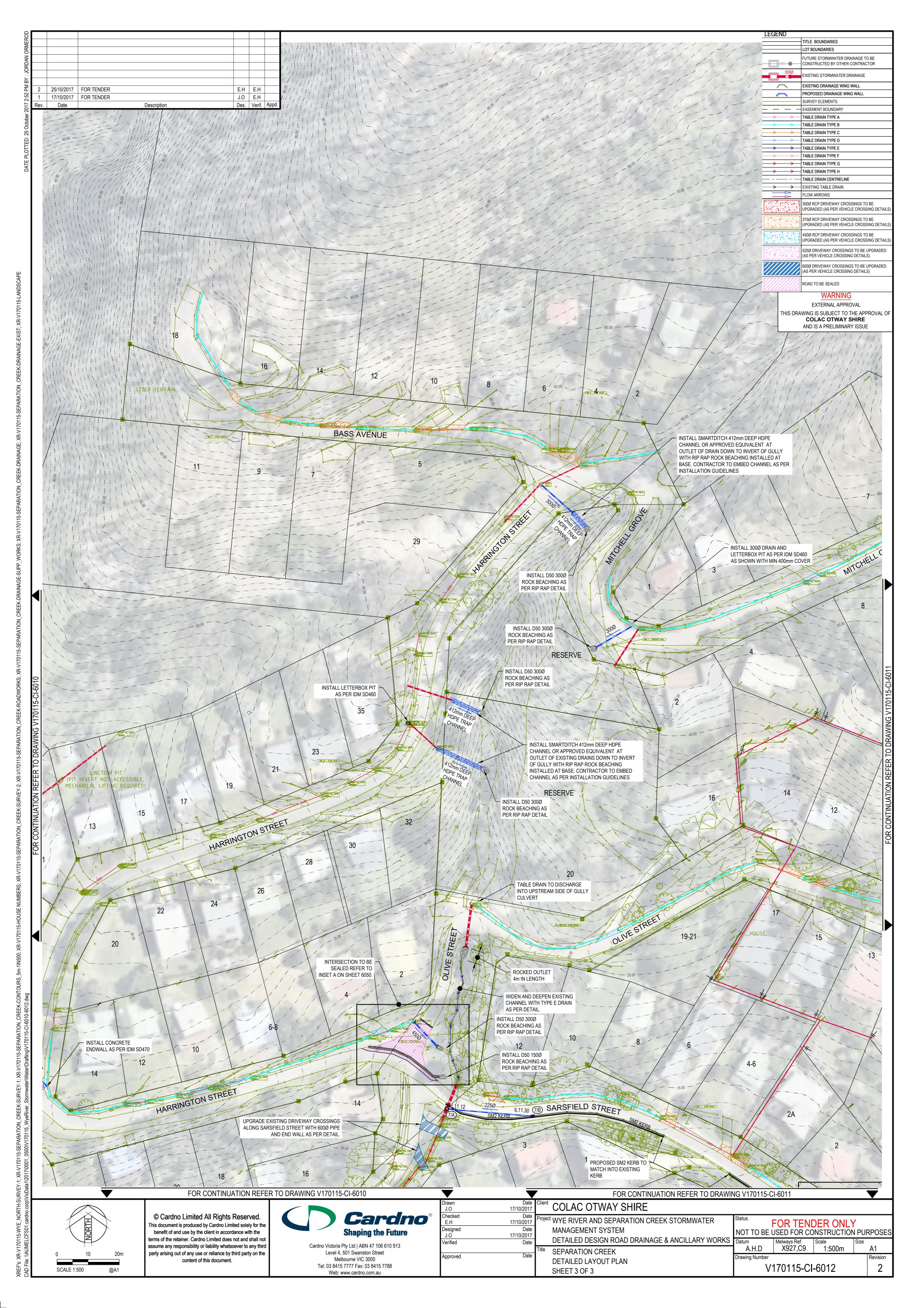
DRAINAGE LONGITUDINAL SECTION AND PIT SCHEDULE

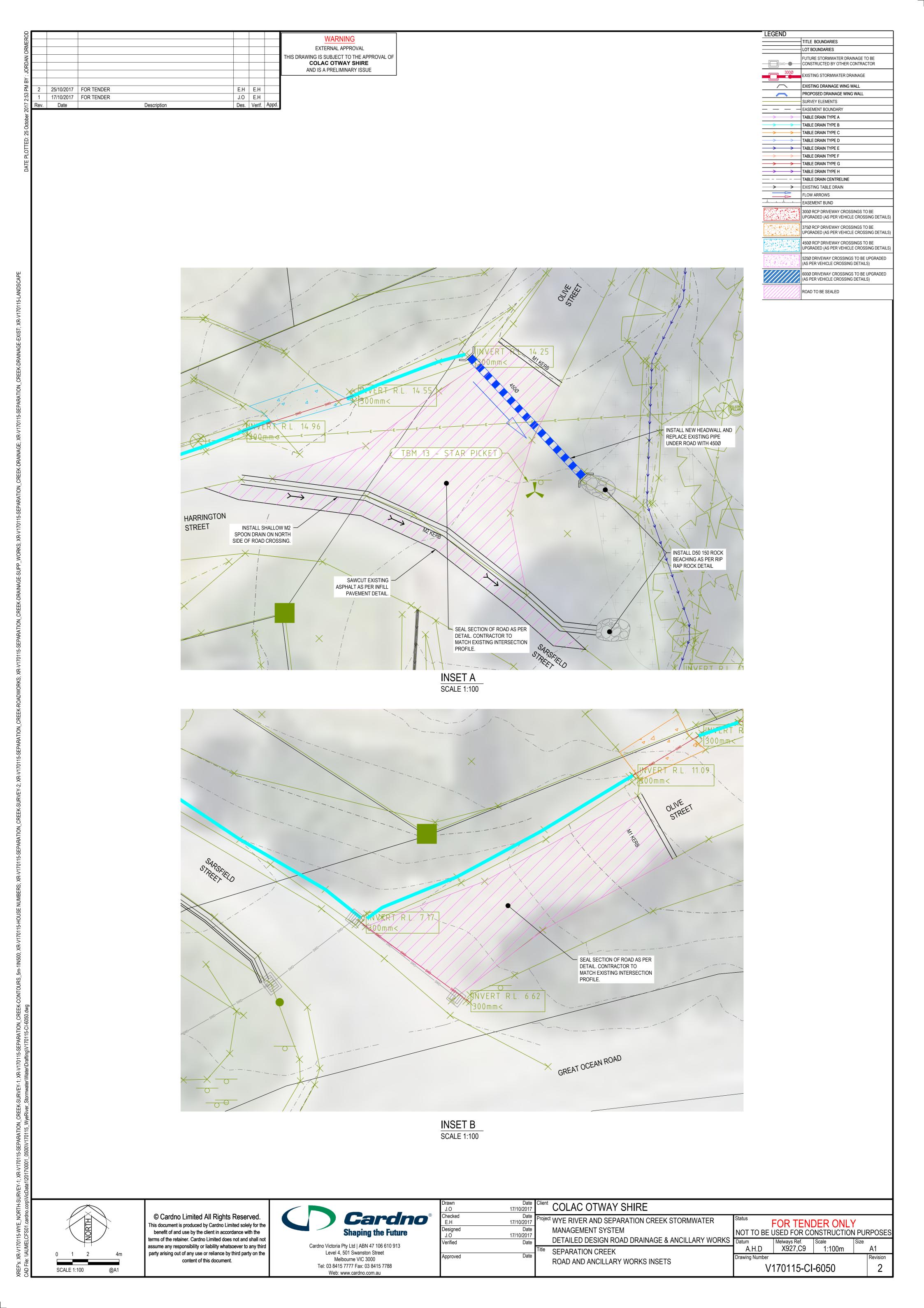
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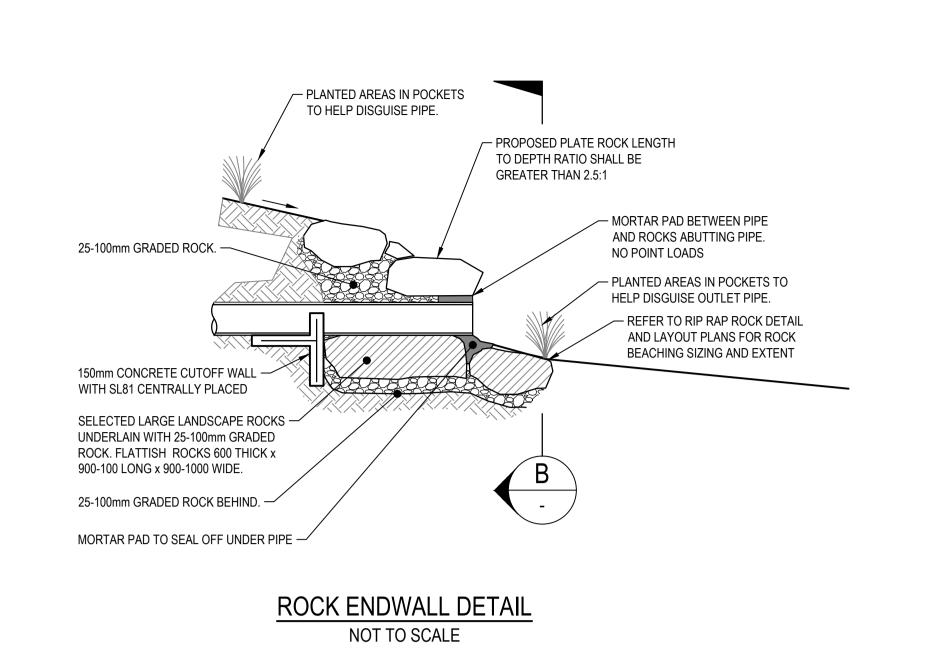


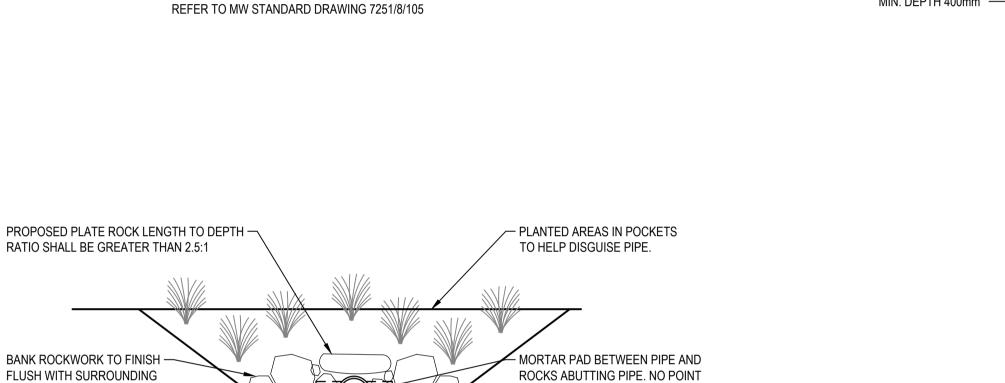




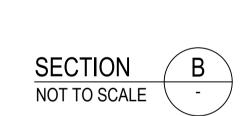




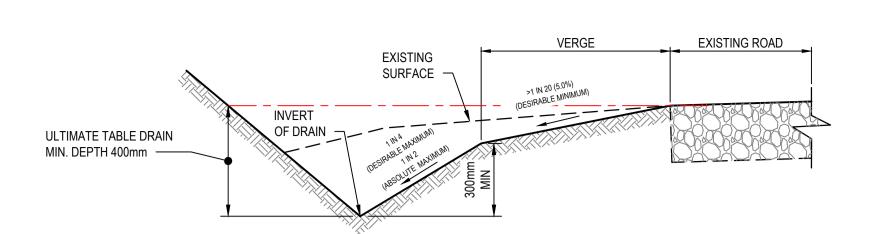




OUTLINE OF CUTOFF WALL

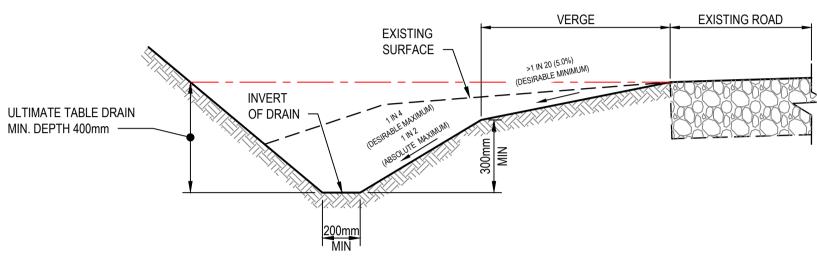


GROUND



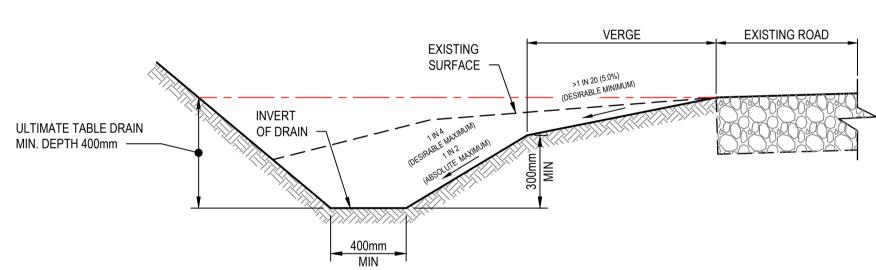
TYPICAL TABLE DRAIN (TYPE-A)

NOT TO SCALE

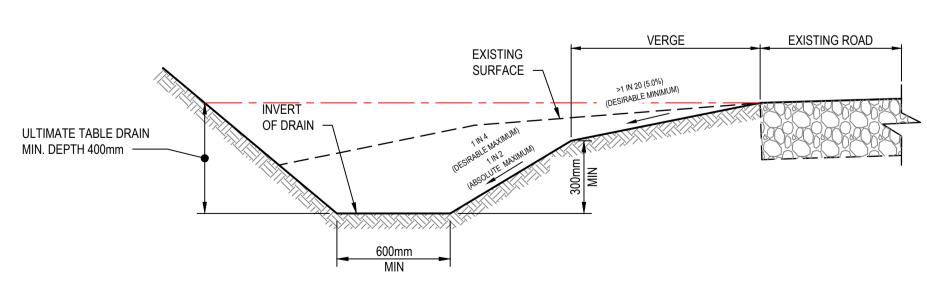


TYPICAL TABLE DRAIN (TYPE-B)

NOT TO SCALE

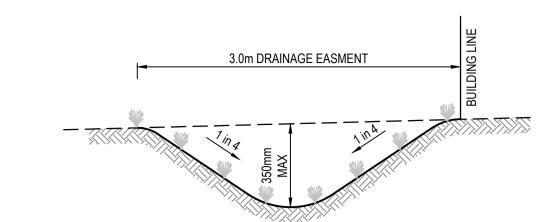


TYPICAL TABLE DRAIN (TYPE-C)
NOT TO SCALE



TYPICAL TABLE DRAIN (TYPE-D)

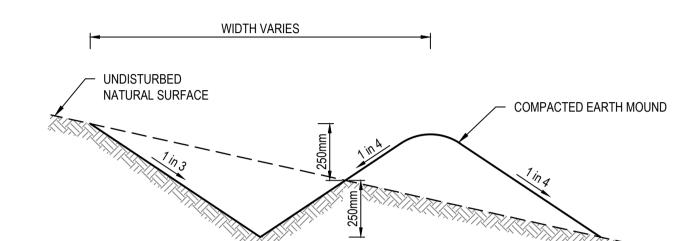
NOT TO SCALE



EASMENT CATCH DRAIN DETAIL (TYPE-E)

NOT TO SCALE

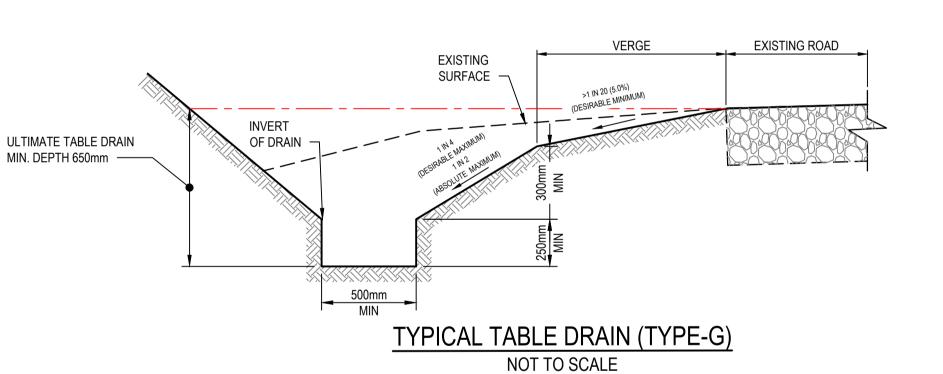
NOTE: DRAINS TO BE GRADED TO NOMINATED OUTLETS. FINISH WITH 100mm TOPSOIL

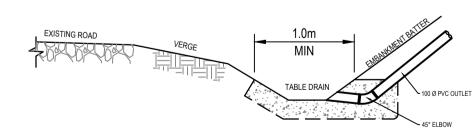


TYPICAL MOUNDED CATCH DRAIN( TYPE-F)

NOT TO SCALE

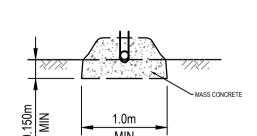
NOTE: DRAINS TO BE GRADED TO NOMINATED OUTLETS. FINISH WITH 100mm TOPSOIL







NOT TO SCALE



ELEVATION NOT TO SCALE

WARNING
EXTERNAL APPROVAL
THIS DRAWING IS SUBJECT TO THE APPROVAL OF COLAC OTWAY SHIRE

AND IS A PRELIMINARY ISSUE

Drawn
J.O
17/10/2017

Checked
E.H
Designed

Date
17/10/2017

Date
17/10/2017

Date
17/10/2017

Date
17/10/2017

Date
MANAGEMENT SYSTEM

Date
MANAGEMENT SYSTEM

Shaping the Future

Cardno Victoria Pty Ltd | ABN 47 106 610 913

Level 4, 501 Swanston Street
Melbourne VIC 3000
Tel: 03 8415 7777 Fax: 03 8415 7788
Web: www.cardno.com.au

MANAGEMENT SYSTEM
DETAILED DESIGN ROAD DRAINAGE

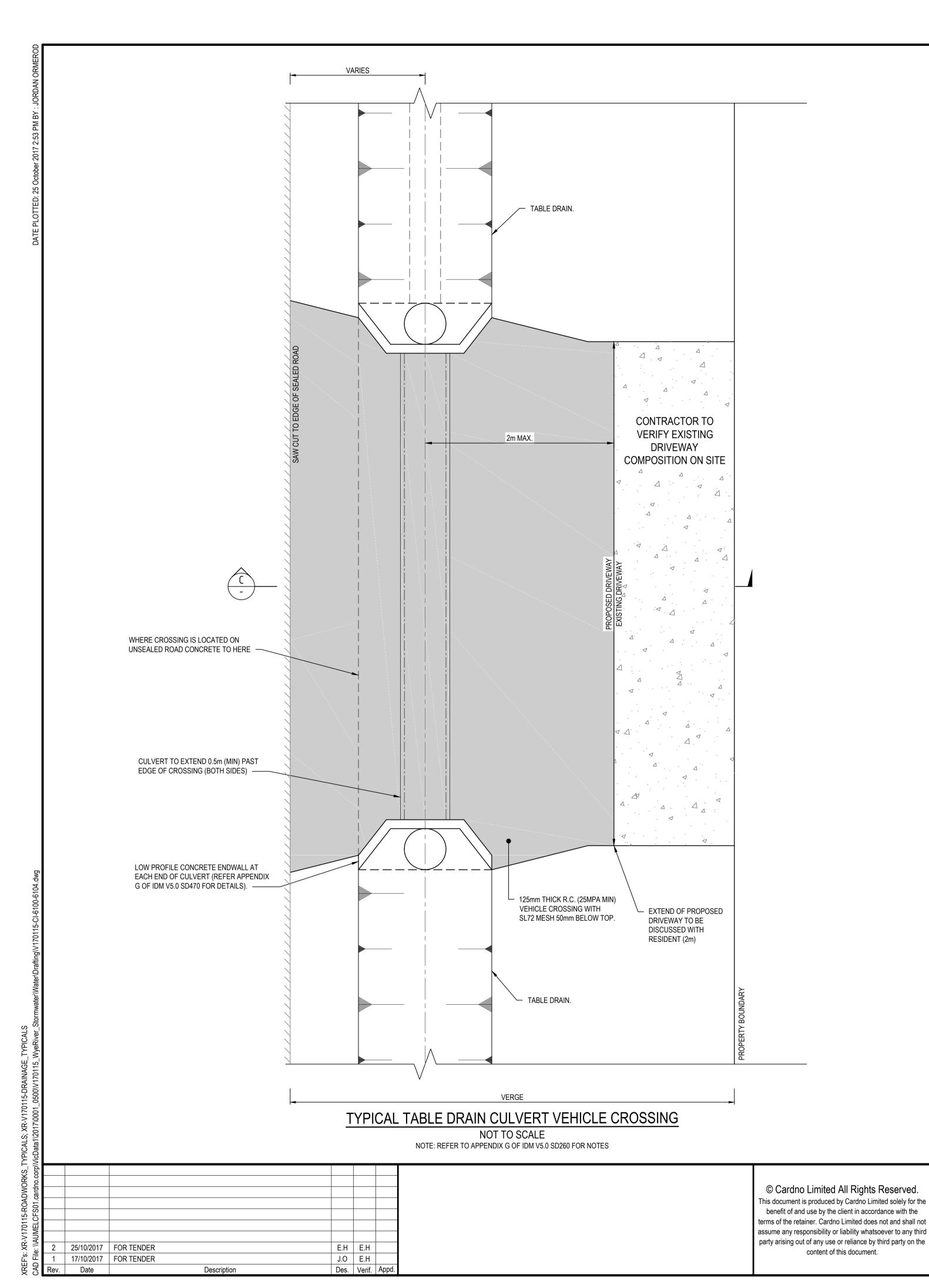
Title SEPARATION CREEK
TYPICALS DETAILS
SHEET 1 OF 5

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ROAD DRAINAGE & ANCILLARY WORKS	Datum A.H.D	Melways Ref. X927,C9	Scale NTS	Size	A1
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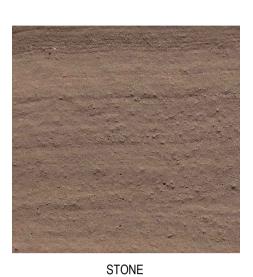
# NOTES:

- CONTRACTOR TO DISCUSS COLOUR OF CONCRETE APRON WITH RESIDENT.
- CONCRETE COLOURS ARE:
   CHARCOAL
  - LIGHT BROWN
  - STONEREGULAR
- CONCRETE FINISH TO BE AT A MINIMUM BROOM FINISH TO IMPROVE SKID RESISTANCE.
- PIPE SIZE NOTED ON PLAN
- TYPE OF CULVERT TO BE DETERMINED ON SITE WITH SUPERINTENDENT.



CHARCOAL







REGULAR

EXISTING ROAD

SHOULDER

WHERE CONNECTING TO EXISTING CONCRETE INSTALL 100mm x 7mm DOWEL RODS @ 300mm CENTRES

ST2 MESH 50mm BELOW TOP.

Somm THICK CLASS 2 FINE CRUSHED ROCK BEDDING LAYER
FINE CRUSHED ROCK BECK FILL FOR R.C.P. UNDER VEHICLE CROSSING.

100mm THICK CLASS 2 FINE CRUSHED ROCK BEDDING LAYER

EXISTING ROAD

SECTION C-C
NOT TO SCALE

WARNING

EXTERNAL APPROVAL

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Cardno Shaping the Future

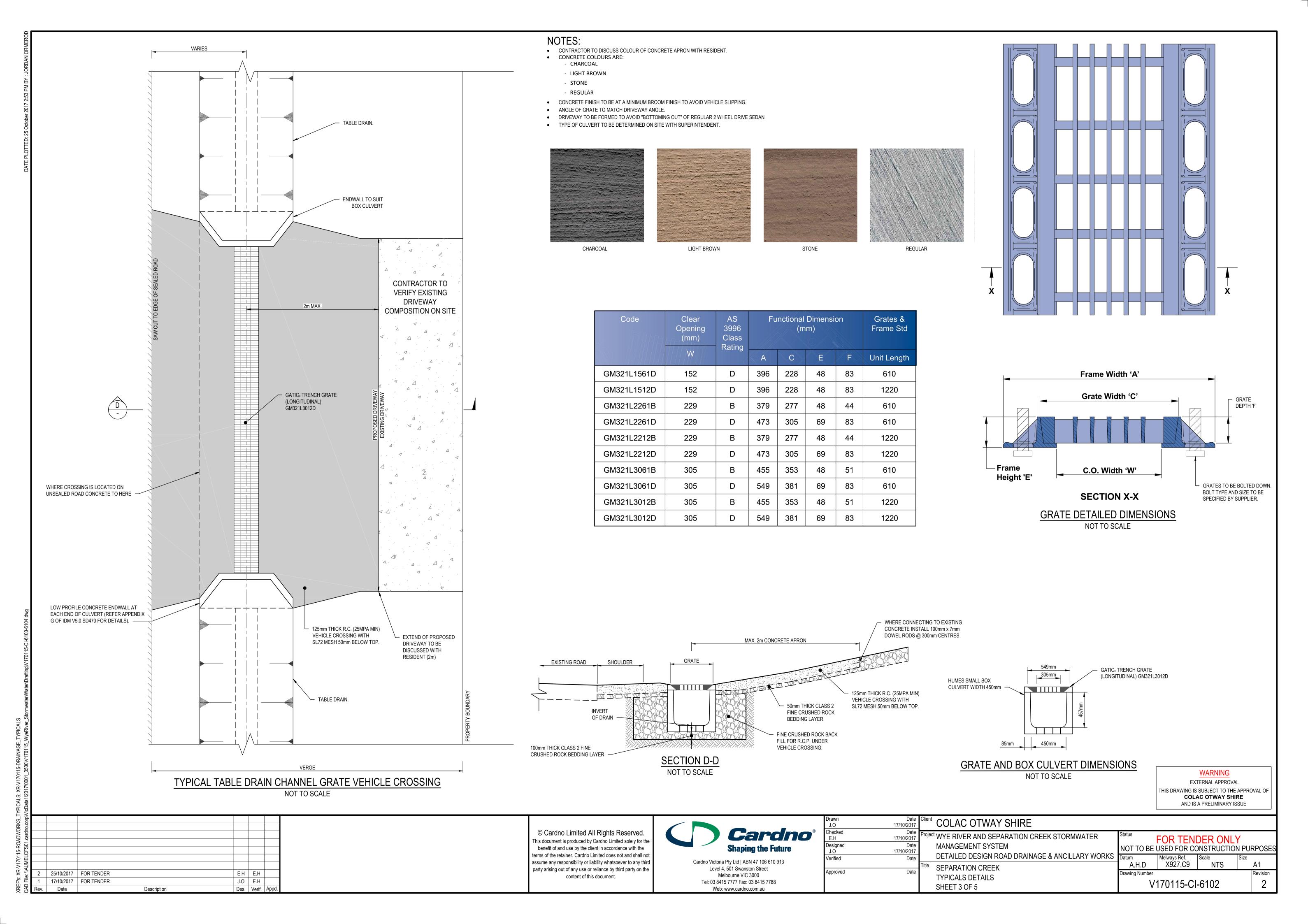
Cardno Victoria Pty Ltd | ABN 47 106 610 913 Level 4, 501 Swanston Street Melbourne VIC 3000 Tel: 03 8415 7777 Fax: 03 8415 7788 Web: www.cardno.com.au

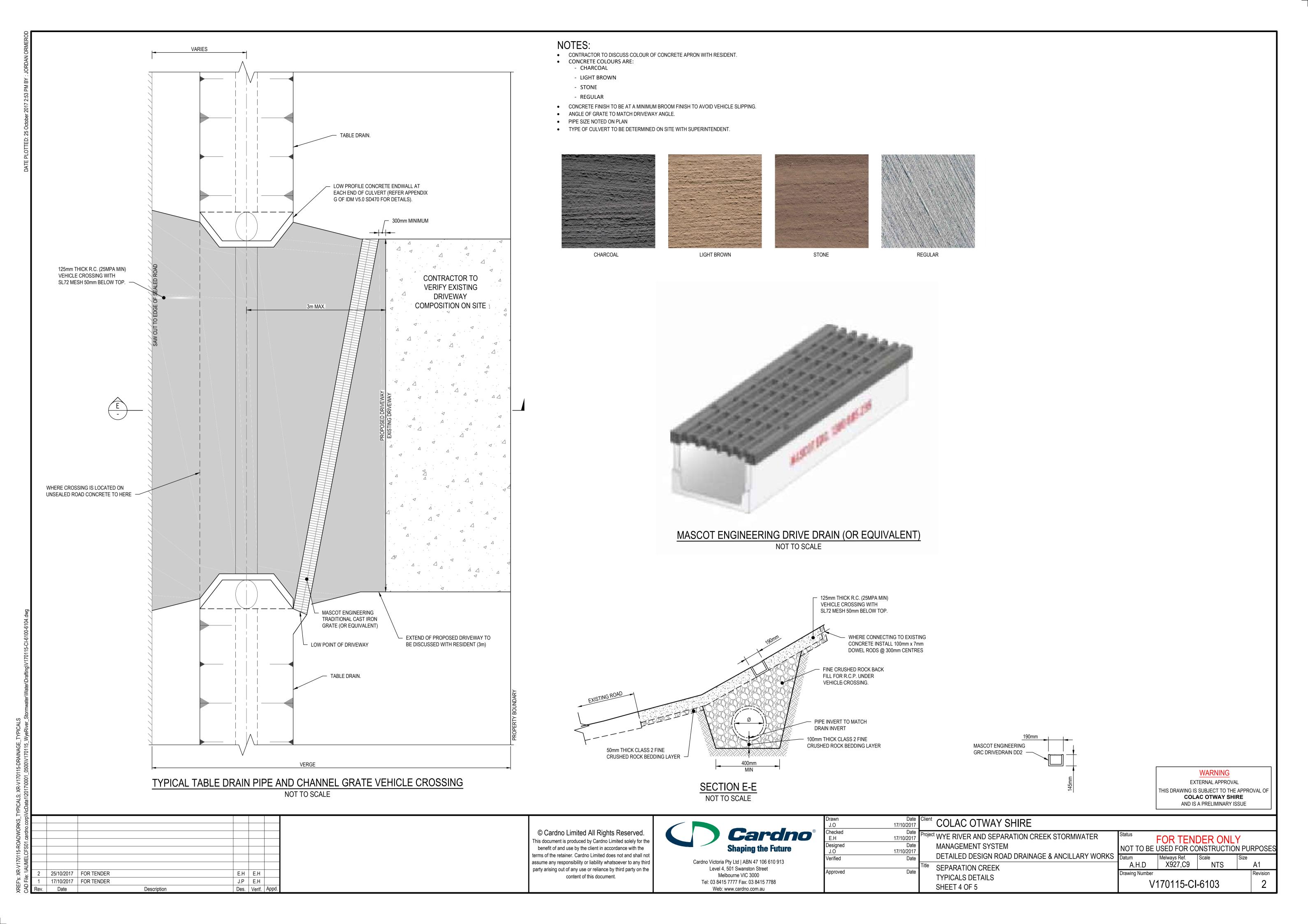
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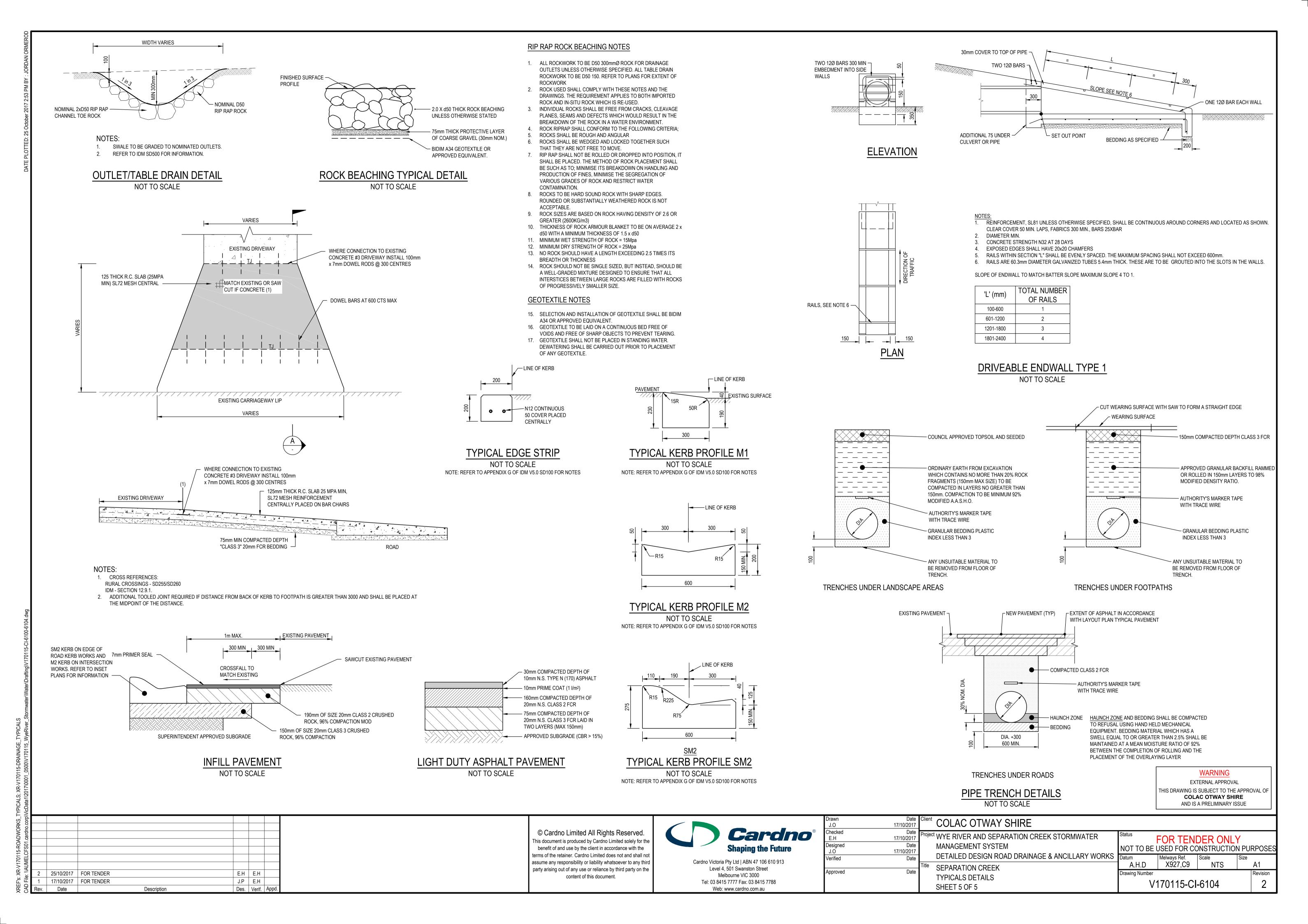
,	Client COLAC OTWAY SHIRE
,	Project WYE RIVER AND SEPARATION CREEK STORMWATER
	MANAGEMENT SYSTEM
;	DETAILED DESIGN ROAD DRAINAGE & ANCILLARY WORK
	Title SEPARATION CREEK
,	TYPICALS DETAILS

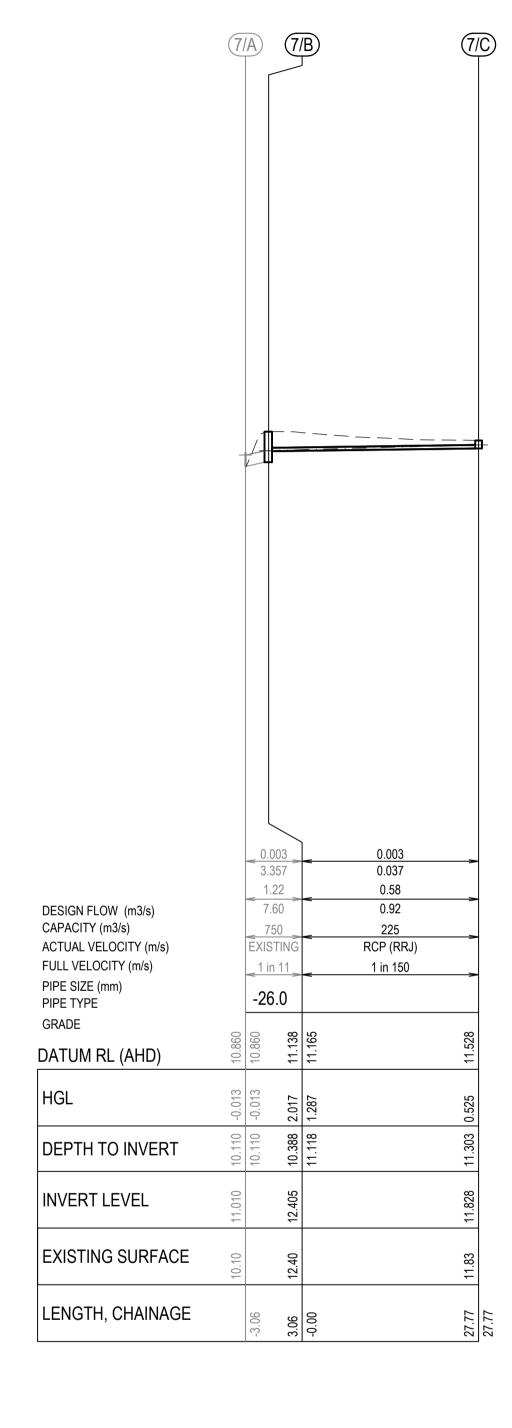
SHEET 2 OF 5

	FOR TENDER ONLY  NOT TO BE USED FOR CONSTRUCTION PURPOSES							
	Datum A.H.D	Melways Ref. X927,C9	Scale NTS	Size	A1			
	Drawing Number				Revision			









PIT SCHEDULE													
PIT NO	LOCATION			INTERNAL		PIT COVER	CLASS (AS		INLET		OUTLET		
	EASTING	NORTHING	TYPE	WD	LEN	LEVEL	3996) DEPTH	DIA	INV LEV	DIA	INV LEV	COMMENTS	
7/B	752283.330	5720417.929	JP	1050	900	12.405	D	2.02	225	11.118	750	10.388	HAUNCHED PIT WITH 600x900 ACCESS. REFER TO IDM SD 410
7/C	752311.008	5720415.618	GSEP	600	900	11.828	D	0.53			225	11.303	GRATE TO BE CLASS D 'BIKE SAFE'. REFER TO IDM SD 441

#### <u>NOTES</u>

- 1. ALL PITS ARE TO BE TO IDM STANDARDS UNLESS NOTED OTHERWISE.
- 2. PITS DEEPER THAN 1.00m SHALL BE FITTED WITH STEPIRONS, FIRST STEPIRON TO BE 300mm FROM THE BOTTOM OF THE PIT.
- 3. COVER LEVELS TO BE SET TO MATCH THE FINISHED SURFACE PROFILES AND ADJACENT CONSTRUCTION.
- 4. GP = GRATED PIT, GSEP = SIDE ENTRY PIT GRATED, DGSEP = DOUBLE SIDE ENTRY PIT GRATED, SEP = SIDE ENTRY PIT, DSEP = DOUBLE SIDE ENTRY PIT, JP = JUNCTION PIT, EP = END OF PIPE, EW = ENDWALL, DEW = DRIVEABLE ENDWALL.
- 5. UNLESS OTHERWISE SPECIFIED, PIT TYPES REFER TO IDM STANDARD DRAWINGS
  - FIGURE SD 405 UNHAUNCHED PITS (450Ø MAX. PIPE)
     FIGURE SD 410 HAUNCHED PITS (MIN 525Ø PIPE)
  - FIGURE SD 420 JUNCTION PIT IN ROAD RESERVE
     FIGURE SD 420 JUNCTION PIT IN ROAD RESERVE
  - FIGURE SD 426 JUNCTION PIT WITH NON-CONCRETE COVER (NON TRAFFICABLE AREAS)
     FIGURE SD 441 GRATED SIDE ENTRY PIT WITH LIGHTWEIGHT COVER & CONCRETE SURROUND FOR 'SM2-M'
  - FIGURE SD 455 DEPRESSED GRATED PIT
  - FIGURE SD 460 INLET CATCH PIT
  - FIGURE SD 465 REINFORCED CONCRETE WINGWALL (IN-SITU)
  - FIGURE SD 470 CONCRETE ENDWALL FOR PIPES UP TO 300mmØ (WALKWAYS, PATHS AND TRACKS)

    FIGURE SD 470 CONCRETE ENDWALL FOR PIPES UP TO 300mmØ (WALKWAYS, PATHS AND TRACKS)
  - FIGURE SD 480 GRATED PIT FOR SM2 MODIFIED KERB & CHANNEL
     FIGURE SD 484 ALTERNATE CRATED BIT FOR SM2 MODIFIED KERB &
  - FIGURE SD 481 ALTERNATE GRATED PIT FOR SM2 MODIFIED KERB & CHANNEL 'SM2-M' UPSTREAM PIT ONLY
     FIGURE SD 496 MODIFIED EXISTING PIT TO GRATED PIT IN VEHICLE CROSSING / LAYBACK
- 6. FOR HAUNCHED PITS REFER TO IDM STANDARD DRAWING FIGURE SD 410. PITS TO BE HAUNCHED TO COUNCIL STANDARD OPENINGS.
  7. STUBS AND PIPE ENDS TO BE BLOCKED OFF TO COUNCIL'S SATISFACTION.
- 8. ALL GRATED PITS TO HAVE BICYCLE SAFE LOCKDOWN GRATES.
- 9. ALL GRATED FITS TO HAVE BICTCLE SAFE LOCKDOWN GRATES.

  9. ALL GRATED SIDE-ENTRY PITS TO HAVE MIN 100mm THICK CONCRETE APRON BETWEEN GRATE AND ASPHALT. REFER IDM STANDARD DRAWINGS.
- 10. PITS WITHIN ROAD PAVEMENT, VEHICLE CROSSINGS OR WITHIN 0.75m OF A VEHICLE CROSSING, TO HAVE CLASS D CAST IRON LOCK DOWN LIDS, LID INFILL COLOURED TO MATCH ROAD SURFACE
- 11. ALL PITS WITHIN ROAD TO BE CONSTRUCTED WITH 32 MPa CONCRETE WITH SL92 MESH IN WALLS AND BASE.
- 12. CONTRACTOR TO VERIFY EXISTING SERVICES CONNECTION LEVELS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES MUST BE IMMEDIATELY IDENTIFIED AND THE SUPERINTENDENT NOTIFIED PRIOR TO CONSTRUCTION COMMENCING.

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Rev.	Date	Description	Des.	Verif.	Appd.					

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Drawn J.O	Date 17/10/2017	Client
Checked E.H	Date 17/10/2017	Proje
Designed J.O	Date 17/10/2017	
Verified	Date	Title
Approved	Date	1100

COLAC OTWAY SHIRE

Project WYE RIVER AND SEPARATION CREEK STORMWATER
MANAGEMENT SYSTEM
DETAILED DESIGN ROAD DRAINAGE & ANCILLARY WORKS

Title SEPARATION CREEK
DRAINAGE LONGITUDINAL SECTION AND PIT SCHEDULE

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