

MCIVOR FOREST STAGE 19 DOWNING DRIVE JUNORTOUN MCIVOR FOREST PTY LTD SEWERAGE RETICULATION

SEWER NOTES

- ALL LEVELS ARE IN METRES TO AUSTRALIAN HEIGHT DATUM (A.H.D.)
- CO-ORDINATES FOR SETTING OUT, WHERE SHOWN, ARE TO M.G.A
- WORKS MUST BE TO CONSTRUCTED ACCORDING TO THE WSA SEWERAGE CODE OF AUSTRALIA WSA 02-2002-2.3. THE CONTRACTOR SHALL ENSURE THAT THEY ARE CONVERSANT WITH THE CURRENT REVISIONS, AMENDMENTS, SPECIFICATIONS, STANDARD DRAWINGS AND UPDATES THAT COLIBAN WATER HAVE MADE TO THEIR CONSTRUCTION STANDARD
- ALL MATERIALS ARE TO BE IN ACCORDANCE WITH COLIBAN WATER'S PREFERRED EQUIPMENT MANUFACTURERS LIST.
- THE CONTRACTOR MUST CLEARLY UNDERSTAND THE REQUIREMENTS OF THE WSA CODE FOR THE CONSTRUCTION OF MH'S AND THEIR BASES. REFER TO THE WSA 1300 SERIES DOCUMENTS WITH CLEARLY DETAIL MINIMUM REQUIREMENTS AND DIMENSIONS IN MILLIMETRES ETC. ACCEPTABLE TO COLIBAN WATER.
- TRENCH SUBSIDENCE OVER SEWER MAINS IS A REAL CONCERN FOR COLIBAN WATER. TO VERIFY COMPLIANCE, COLIBAN WATER REQUIRES EVIDENCE IN THE FORM OF COMPACTION TESTING RESULTS, COMPLIANT WITH THE WSA CODE, SECTION 22 "ACCEPTANCE TESTING".
- CHAINAGES WHERE SHOWN ON DETAIL PLANS ARE DISCONTINUOUS AT MAINTENANCE STRUCTURES.
- CHAINAGES SHOWN ON LONGITUDINAL PLANS ARE CONTINUOUS.
- PIPE MATERIAL, UNLESS SHOWN OTHERWISE.

PIPE TYPE	PIPE CLASS	AUSTRALIAN STANDARD	LOCATION
u P.V.C.	SN6 OR SN10	A.S. 1260	100MM DIA PROP. BRANCHES
u P.V.C.	SN8	A.S. 1260	150MM DIA RETIC. SEWERS

NOTE: SEWERPRO PIPE IS NOT ACCEPTABLE TO COLIBAN WATER.

- ACCESS CHAMBERS
 - ACCESS CHAMBER COVERS SHALL BE LEVEL WITH AND SHALL CONFORM TO SLOPE AND CROSSFALL OF THE FINISHED SURFACE. THE FINISHED SURFACE LEVELS SHOWN ARE APPROXIMATE ONLY. THE PRINCIPAL CONTRACTOR IS RESPONSIBLE FOR SETTING THE CONSTRUCTION LEVELS INCLUDING COVER GRADES BASED ON THE ROAD AND DRAINAGE PLANS. ALL SEWER COVERS ARE TO BE CONSTRUCTED TO THESE LEVELS. MAXIMUM SLOPE FOR CLASS C OR D COVERS TO BE 1 IN 10. MAXIMUM SLOPE FOR CLASS A OR B COVERS TO BE 1 IN 4.
 - ACCESS CHAMBERS AND INSPECTION SHAFTS IN ROAD RESERVES AND R.O.W.'S CONSTRUCTED PRIOR TO THE CONSTRUCTION OF FOOTPATHS SHALL BE PROVIDED WITH A TEMPORARY COVER. THE PLACING OF THE FINAL COVER SHALL NOT BE CARRIED OUT UNTIL THE CONCRETE FOOTPATH HAS BEEN CONSTRUCTED.
 - ALL ACCESS CHAMBERS TO BE 1070MM DIAMETER UNLESS OTHERWISE SHOWN.
- EARTHWORKS

IN AREAS SUBJECT TO EARTHWORKS, THE CONSTRUCTION OF SEWERS MUST NOT COMMENCE UNTIL THE EARTHWORKS HAVE BEEN COMPLETED OR THE SUPERINTENDENT GIVES WRITTEN APPROVAL TO COMMENCE. SUCH APPROVAL WOULD NOT BE GIVEN UNLESS THE CONTRACTOR CAN DEMONSTRATE THAT THE SEWER WOULD BE SATISFACTORILY PROTECTED AGAINST DAMAGE FROM CONSTRUCTION LOADS.

PVC:
WHERE CLEAR COVER LESS THAN 600MM, TYPE F2C BEDDING AND COVERING SHALL BE PLACED AROUND SEWERS. UNDER ROAD PAVEMENTS WHERE THE CLEARANCE BETWEEN THE TOP AND BOTTOM OF BOXING AND TOP OF SEWER IS LESS THAN 900MM, TYPE F2C BEDDING AND COVERING SHALL BE PLACED AROUND SEWERS.
- THE CONTRACT IS IN ACCORDANCE WITH AS2124-1992. IN ACCORDANCE WITH CLAUSE 15 OF AS2124-1992, THE CONTRACTOR MUST ENSURE THE SAFETY OF THE CONTRACTORS EMPLOYEES AND ALL OTHER PEOPLE WHO ARE ON OR ADJACENT THE SITE.
- COLIBAN WATER MUST BE NOTIFIED BY THE CONTRACTOR FIVE WORKING DAYS PRIOR TO COMMENCING WORKS ON EXISTING SEWER.
- CONNECTION TO LIVE SEWER: CONFINED SPACE ENTRY MUST BE IN ACCORDANCE WITH BOTH COLIBAN WATER AND OH&S REQUIREMENTS. CONTRACTOR MUST NOT ENTER A CONFINED SPACE UNTIL ALL REQUIRED INFORMATION HAS BEEN SUBMITTED TO COLIBAN WATER.
- PROPERTY BRANCH FITTINGS MUST BE LOCATED AT LEAST 0.5M WITHIN PROPERTY BEING SERVICED, AND CLEAR OF ANY OBSTRUCTIONS. PROPERTY CONNECTION POINT JUMP UPS ARE TO BE FINISHED AT SURFACE LEVEL AS PER COLIBAN WATER ANNEXURE TO WSA02-2002-2.3. PROPERTY BRANCH MUST BE A MINIMUM 1m FROM SIDE BOUNDARIES.
- 7 CLEAR DAYS NOTICE PRIOR TO COMMENCEMENT OF THE WORKS MUST BE GIVEN TO THE SUPERINTENDENT.
- WSA CODE REQUIREMENTS FOR MINIMUM VERTICAL, AND HORIZONTAL CLEARANCES FROM THE SEWER ASSETS, TO OTHER SERVICES ARE NOT COMPROMISED.

- ALL MH'S PROPOSED TO BE LOCATED WITHIN LOTS, CLOSE TO THE FOOTPATHS/STREET FRONTAGES, WHERE PROPOSED FINISHED SURFACES ARE CONTOURED, OR SLIGHTLY HIGHER THAN A FOOTPATH OR OTHER SURFACES. COLIBAN WATER REQUIRES THE CONCRETE COVERS OF THE MH'S CONSTRUCTED IN THESE LOCATIONS, USING A TAPERED PRECAST CONCRETE MAKE UP RINGS, OR PRECAST SPACER RINGS. REFER TO SEW-1308-V OF THE CODE.
- SERVICE CONNECTIONS
 - ALL NEW SERVICE CONNECTIONS MUST BE IN ACCORDANCE WITH THE REQUIREMENTS OF COLIBAN WATERS SPECIFICATION OF WORKS FOR CONSTRUCTION OF RETICULATION SEWERS, ADDENDUM AND ASSOCIATED STRUCTURES, AS3500 AND THE SEWERAGE STANDARD DRAWINGS.
 - THE CONNECTION POINT MUST BE EXTENDED A MINIMUM OF 0.6 METRES INTO THE BOUNDARY OF A LOT. A FURTHER DISTANCE MAY BE REQUIRED TO CLEAR STORM WATER DRAINS. THIS DISTANCE IS 300MM OR THE THE EDGE OF THE EASEMENT.
 - PROPERTY CONNECTION SIDE-LINE MUST BE LOCATED A MINIMUM OF 1.0METRES FROM A SIDE BOUNDARY. A SIDE-LINE MUST NOT EXCEED A MAXIMUM LENGTH OF 3.0METRES IN LENGTH UNLESS APPROVED BY COLIBAN WATER.
 - THE SIDE-LINE MUST BE CONSTRUCTED TO ACHIEVE A MINIMUM OF 600MM HORIZONTAL CLEARANCE. FROM ANY OTHER SERVICES, FOR EXAMPLE 600MM MINIMUM FROM THE NEAREST EDGE OF A STORM WATER DRAIN OR PIT.
- BLASTING - NO BLASTING IS PERMITTED.
- TESTING

ALL NEW SEWERS MUST BE PRESSURE TESTED. WHERE THE CONTRACTOR DOES NOT HAVE A QUALITY ASSURANCE SYSTEM IN PLACE, ALL PIPES MUST BE INSPECTED BY THE SUPERVISING ENGINEER.
- ENVIRONMENTAL REQUIREMENTS
 - ALL TREES MUST BE PRESERVED AND PROTECTED AT ALL TIMES.
 - TREES MARKED X ON THE DESIGN PLANS MAY BE REMOVED.
- WIN25 GRADE CONCRETE - GP TYPE CEMENT MUST BE USED IN ALL CONSTRUCTION, UNLESS OTHERWISE NOTED IN COLIBAN WATERS SEWER DESIGN MANUAL.
- SEWER SETOUTS
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE HORIZONTAL ALIGNMENT AND FOR OFFSETTING PEGS DURING CONSTRUCTION.
 - SETOUT AND VERIFICATION OF LEVELS SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
- THIS DESIGN COMPLIES WITH COLIBAN WATER STANDARDS AND THE SUPPLY OFFER DATED xx/xx/18.
- THE CONTRACTOR MUST LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORKS.
- THE LEVEL OF ALL EXISTING OUTFALL SEWERS MUST BE CONFIRMED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING.
- CLASS 3 FCR BACKFILL MUST BE USED WHERE SEWER MAINS CROSS ROAD PAVEMENT, FOOTPATHS OR DEFINED DRIVEWAYS.
- PIPES JOINS ARE TO BE CONSTRUCTED STRICTLY TO THE MANUFACTURER'S SPECIFICATIONS - MANUALLY JOINED AND NOT USING MECHANICAL EQUIPMENT SUCH AS AN EXCAVATOR BUCKET ETC.
- PROPERTY CONNECTION POINT JUMP UPS ARE TO BE FINISHED AT SURFACE LEVEL WITH A CONCRETE SURROUND AND COVER AS PER COLIBAN WATER'S ANNEXURE.
- THE CONTRACTOR MUST ADHERE TO THE CODE OF PRACTICE FOR 'SAFETY PRECAUTIONS IN TRENCHING OPERATIONS' UNDER THE 'OCCUPATIONAL HEALTH & SAFETY ACT 2004'
- CAST IRON CONCRETE INFILL STYLE COVERS ARE NOT ACCEPTABLE.
- THE CONCRETE FINISH OF THE MANHOLE BENCHING AND CHANNELS HAS BEEN FINISHED WITH A METAL FLOAT. A BROOM FINISH IS NOT ACCEPTABLE.
- CONTRACTOR TO REFER TO WSA CODE, CLAUSE 31.4 "MANHOLE PIPE CONNECTION DETAIL" AND DRAWING SEW-1302-V AND SEW-1200. EVIDENCE IS REQUIRED TO VERIFY THE NEED FOR, OR EXEMPLIFY THE NEED FOR, SOCKET JOINTS OR COUPLINGS (RRJ) AND A SHORT "ROCKER" PIPE TO BE INSTALLED TO PROVIDE FLEXIBILITY NECESSARY TO ACCOMMODATE DIFFERENTIAL SETTLEMENT BETWEEN THE MANHOLE BASE AND THE SEWER. THE SOLVENT CEMENT JOINT (SCJ) OPTION SHOULD NOT BE USED IF THE MANHOLE FOUNDATION HAS A BEARING PRESSURE LESS THAN 100kPa.

- WHERE INTERNAL DROP STRUCTURES ARE REQUIRED WITHIN A MANHOLE. A STARTER PIPE IS REQUIRED THROUGH THE WALL OF THE MANHOLE, WHICH IS TO BE SUPPORTED AND PROTECTED BY ADDITIONAL CONCRETE. THE AREA OF THE CHANNEL WHERE A BEND IS CONSTRUCTED AT THE BASE OF AN INTERNAL DROP STRUCTURE, MUST BE CONCRETED INTO PLACE. 316 STAINLESS STEEL CLIPS AND NON-CORROSIVE FIXINGS ARE REQUIRED TO SUPPORT THE INTERNAL DROP STRUCTURE. PLEASE ENSURE THAT THE FIRST CLIP IS TO BE CONSTRUCTED AT THE TOP OF THE INTERNAL DROP AND THEN AT INTERVALS NOT EXCEEDING 1.50 METRES.
- IN ACCORDANCE WITH SECTION 22.7 (WSA 02-2002-2.3, VERSION 1.0) COLIBAN WATER REQUIRES SATISFACTORY EVIDENCE IN THE FORM OF CALIBRATED CCTV RECORDING OF THE ASSETS ACCOMPANIED BY A DETAILED REPORT. COLIBAN WATER REQUIRES THE FOOTAGE TO BE PROVIDED TO THE ASSIGNED CASE MANAGER IN A USB FLASH DRIVE FORMAT FOR REVIEW PRIOR TO A PHYSICAL ONSITE INSPECTION.
- IN ACCORDANCE WITH SECTION 22.7 (WSA 02-2002-2.3, MELBOURNE RETAIL WATER AGENCIES EDITION, VERSION 1.0) COLIBAN WATER REQUIRES SATISFACTORY EVIDENCE IN THE FORM OF CALIBRATED CCTV RECORDING OF THE ASSETS ACCOMPANIED BY A DETAILED REPORT.
- COLIBAN WATER REQUIRES THE FOOTAGE TO BE PROVIDED IN A USB FLASH DRIVE FORMAT FOR REVIEW PRIOR TO A PHYSICAL ONSITE INSPECTION. ANY IDENTIFIED ISSUES MUST BE RECTIFIED AND NEW CCTV FOOTAGE PROVIDED TO CONFIRM IDENTIFIED DEFECTS HAVE BEEN ADDRESSED. (APPLICABLE TO NEW SECTION ONLY)
- PRIOR TO COLIBAN WATER PRACTICAL COMPLETION INSPECTION THE FOLLOWING MUST BE COMPLETED:
 - ALL STRUCTURES MUST REACH PRACTICAL COMPLETION PRIOR TO THE CCTV RECORDING
 - SILICONE SEALANT OR SIMILAR, IS NOT AN ACCEPTABLE MATERIAL TO BE USED TO FILL THE REBATE IN CAST IRON MH COVERS. FERRO PRE IS ACCEPTABLE.
 - CUT PIPES MUST BE CUT AT RIGHT ANGLE TO THE PIPE, BE DE BURRED AND PREPARED PER THE MANUFACTURERS SPECIFICATIONS PRIOR TO ANY PIPE JOINTS BEING CONSTRUCTED
 - CLEANING FLUID MUST BE VISIBLE
 - EXCESSIVE GLUE IS NOT ACCEPTABLE
 - SECTIONS OF PIPE WHICH HAVE BEEN DISTORTED OR DAMAGED IN ANY WAY, MUST NOT BE CONSTRUCTED AS PART OF THE SEWER MAINS
 - SEWERS MUST BE LAID STRAIGHT AND WITH A CONSISTENT UNIFORM GRADIENT
 - SEWERS AND STRUCTURES (MH'S, MS'S, TMS'S) MUST BE FREE OF ANY DEBRIS
 - SURFACE AND/OR TRENCH/GROUND WATER IS NOT PERMITTED TO ENTER SEWERS
 - ANY SIGNS OF WATER INGRESS DUE TO MATERIAL FAILURE, JOINT CONSTRUCTION FAILURE, POROUS CONCRETE, DAMAGED CONCRETE PRODUCTS OR THE USE OF SECONDS WILL NOT BE ACCEPTABLE. ALL MATERIALS MUST BE OF THE HIGHEST QUALITY AND COMPLIANT WITH THE RELEVANT AUSTRALIAN STANDARDS
 - ALL WORKS MUST BE CONSTRUCTED AND FINISHED IN A TRADESMANSHIP LIKE MANNER. SUBSTANDARD WORKS WILL NOT BE ACCEPTABLE.
 - TRENCHES MUST BE REINSTATED PER THE MINIMUM REQUIREMENT OF THE WSA CODE. TRENCH SUBSIDENCE IS NOT ACCEPTABLE AT ANY TIME.
 - COLIBAN WATER HAS A ZERO TOLERANCE FOR POORLY CONSTRUCTED SOLVENT WELDED OR RUBBER RING JOINTED ASSETS, WHERE JOINTS HAVE GAPS, SPIGOT PIPE JOINTS NOT FULLY INSERTED, SPIGOT PIPES THAT HAVE BEEN OVER INSERTED, UNEVEN ALIGNMENT OF JOINTS EITHER RUBBER RING, SLEEVED OR SOLVENT WELDED, SECTION OF SEWER MAINS OR MAINTENANCE THAT RETAIN WATER.



LOCALITY PLAN

WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

DIAL BEFORE YOU DIG
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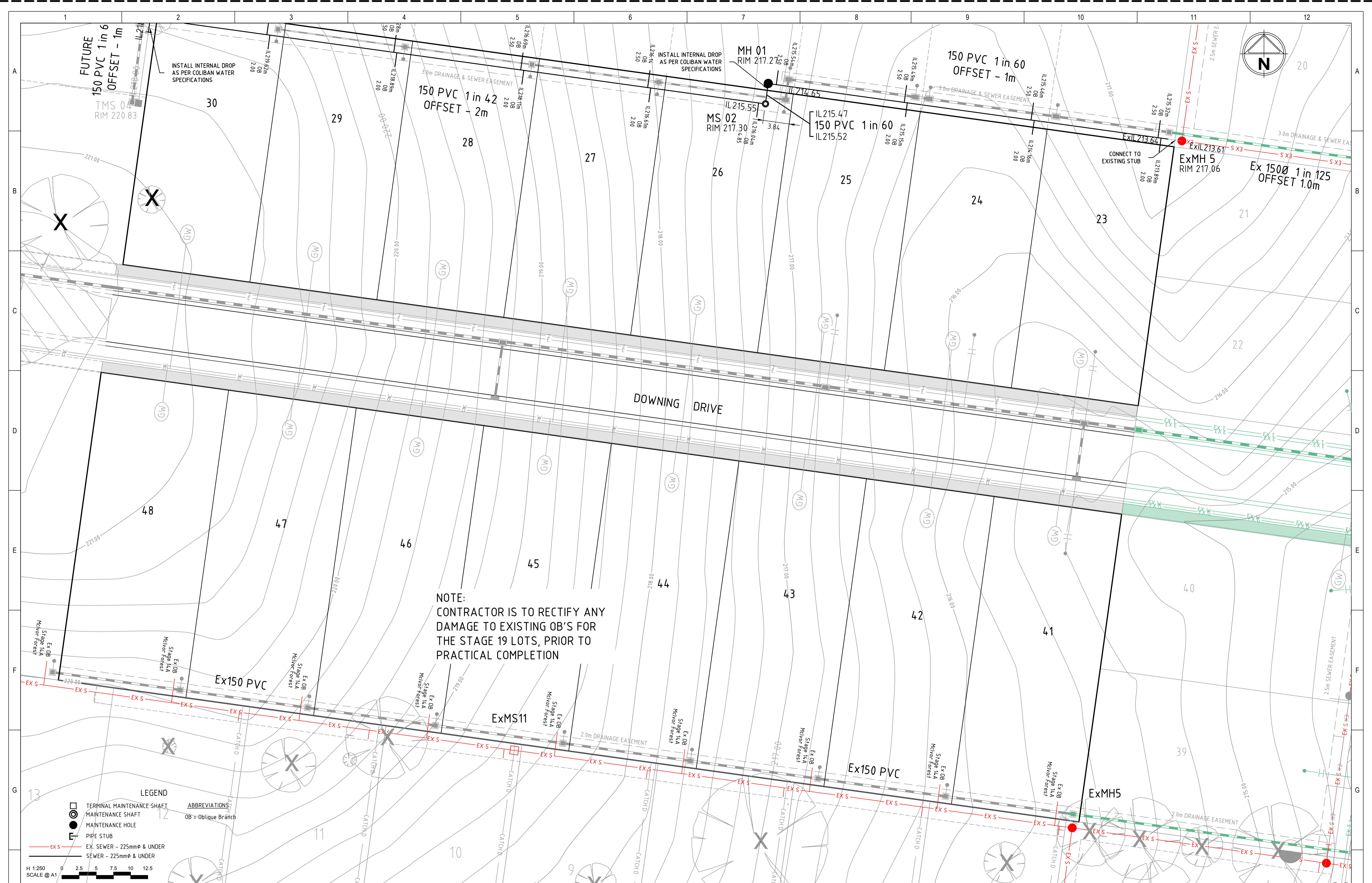
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				DRAWN	K.ELDRIDGE	MELWAY REFERENCE	608 K10				
				CHECKED	B.IBBS	AUTHORISED	B.IBBS				
				DATE	13-11-17						
1	2	3	4	5	6	7	8	9	10	11	12
C	INITIAL PRE DESIGN PLANS	18-07-18	B.I.								
B	VERIFIED DESIGN PLANS	05-09-17	B.IBBS								
A	INITIAL PRE DESIGN	20-06-17	B.IBBS								
REV	DESCRIPTION	DATE	APPROVED	REV	DESCRIPTION	DATE	APPROVED				

MCIVOR FOREST PTY LTD

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Coliban WATER
 CITY OF GREATER BENDIGO DS/539/2012
 MCIVOR FOREST STAGE 19
 DOWNING DRIVE JUNORTOUN
 SEWER RETIC GENERAL NOTES
 SME 18239

SCALE: NOT TO SCALE	
SHEET: 1 OF 4	
DRAWING No.: 304342CS100	REV C



NOTE:
CONTRACTOR IS TO RECTIFY ANY
DAMAGE TO EXISTING OB'S FOR
THE STAGE 19 LOTS, PRIOR TO
PRACTICAL COMPLETION

LEGEND

- TERMINAL MAINTENANCE SHAFT
- MAINTENANCE SHAFT
- MAINTENANCE HOLE
- PIPE STUB
- EX. SEWER - 225mm & UNDER
- SEWER - 225mm & UNDER

ABBREVIATIONS

- OB = Oblique Branch

H 1:250
SCALE @ A1

DESIGNED		K.ELDRIDGE		PROJECT NUMBER		304342	
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CHECKED		B.IBBS		AUTHORISED		B.IBBS	
REV		DATE		APPROVED		DATE: 13-11-17	
1	DESCRIPTION	2	DATE	3	APPROVED	4	DESCRIPTION
C	INITIAL PRE DESIGN PLANS	18-07-18	B.I.				
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A	INITIAL PRE DESIGN	20-06-17	B.IBBS				

MCIVOR FOREST PTY LTD

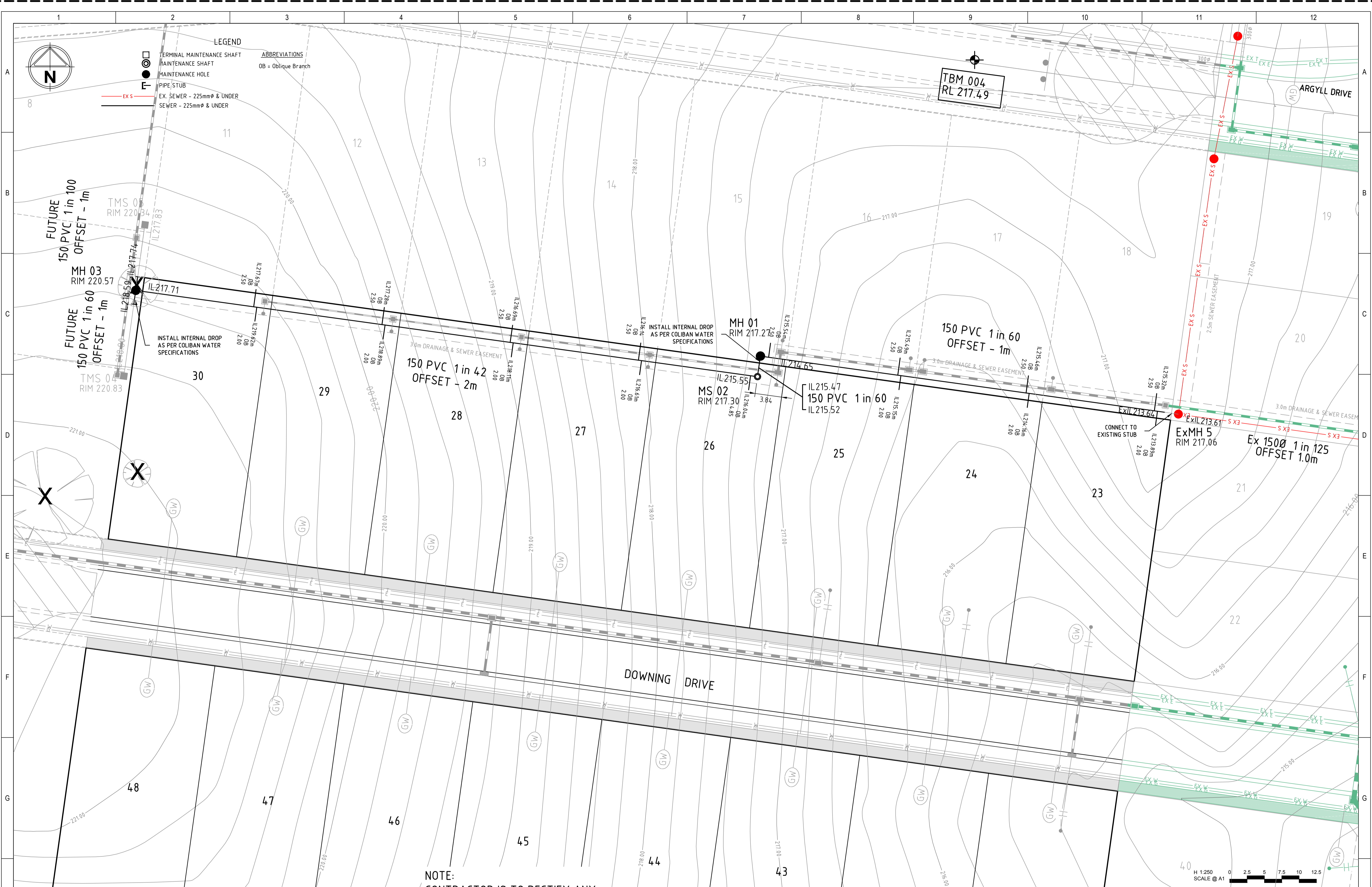
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COLIBAN WATER
CITY OF GREATER BENDIGO DS/539/2012
MCIVOR FOREST STAGE 19
DOWNING DRIVE JUNORTOWN
SEWER RETIC LAYOUT PLAN
SME 18239

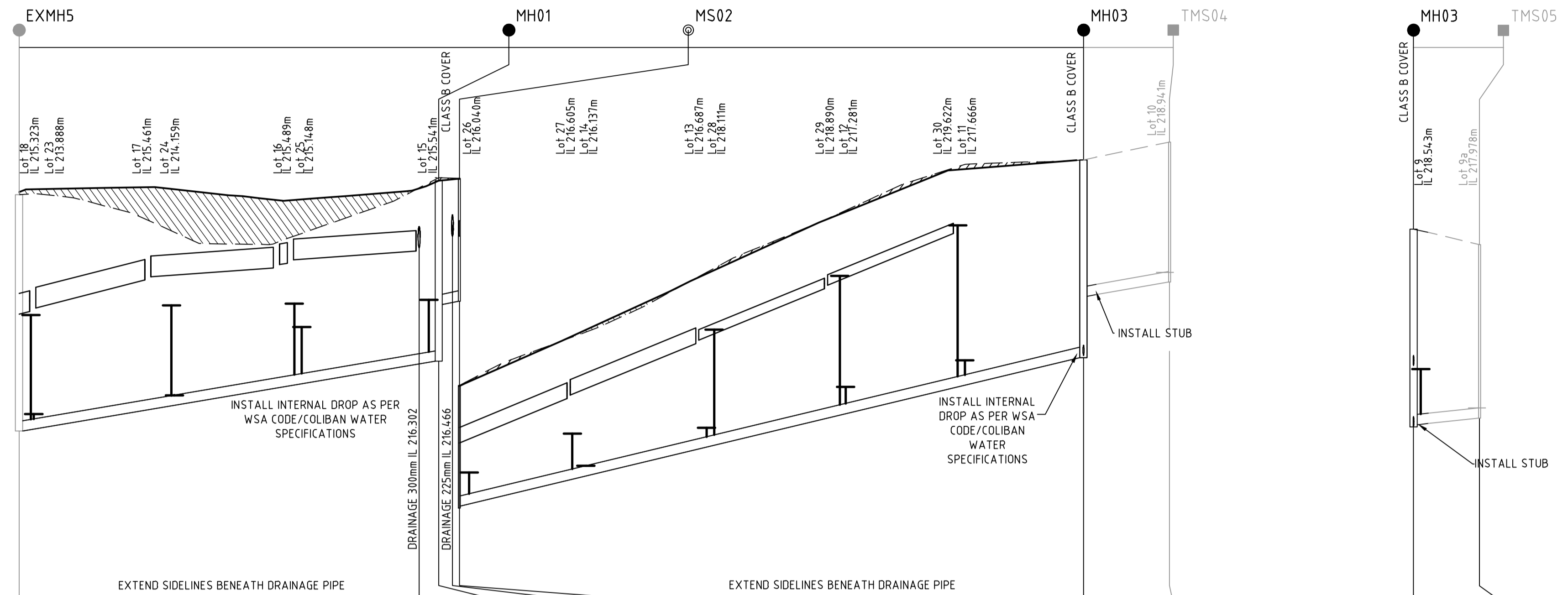
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SHEET: 2 OF 4
DRAWING No.: 304342CS200
REV C



				DESIGNED	K.ELDRIDGE	PROJECT NUMBER	304342	MCIVOR FOREST PTY LTD 18 Bridge Street Bendigo Victoria 3550 Australia T: 61 3 5448 2500 spiire.com.au ABN 55 050 029 635				COLIBAN WATER CITY OF GREATER BENDIGO DS/539/2012 MCIVOR FOREST STAGE 19 DOWNING DRIVE JUNORTOWN SEWER RETIC LAYOUT PLAN SME 18239		SCALE: AS SHOWN	
				DRAWN	K.ELDRIDGE	MELWAY REFERENCE	608 K10							SHEET: 3 OF 4	
				CHECKED	B.IBBS	AUTHORISED	B.IBBS							DRAWING No.: 304342CS201	
REV	DESCRIPTION	DATE	APPROVED	REV	DESCRIPTION	DATE	APPROVED	DATE:	13-11-17	REV	C				

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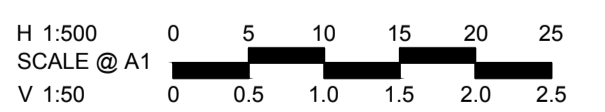
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DIAMETER & GRADE	150Ø 1 in 60		150Ø 1 in 60		150Ø 1 in 42		150Ø 1 in 60		150Ø 1 in 100		
DATUM R.L. (m)	210.00		213.00		213.00		213.00		214.00		
DESIGN SURFACE / (EXIST. SURFACE)	217.064 (217.064)		217.270 (217.311)	217.295 (217.302)	217.295 (217.302)	217.295 (217.302)	220.570 (220.570)	220.570 (220.570)	220.828 (220.828)	220.828 (220.828)	
DESIGN INVERT LEVEL	213.639	213.639	214.613	214.652	215.473	215.504	215.522	215.552	217.705	218.593	218.800
DEPTH TO INVERT	3.465	3.465		2.617	1.797		1.773	1.743	2.865	1.977	2.028
CHAINAGE	0.000		57.950	60.790	62.780		63.781		154.191	166.641	

SYMBOLS AND GENERAL NOTES

- TERMINAL MAINTENANCE SHAFT
- MAINTENANCE HOLE
- MAINTENANCE SHAFT



REV	DESCRIPTION	DATE	APPROVED	REV	DESCRIPTION	DATE	APPROVED
C	INITIAL PRE DESIGN PLANS	18-07-18	B.I.				
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DESIGNED	K.ELDRIDGE	PROJECT NUMBER	304342	MCIVOR FOREST PTY LTD			COLIBAN WATER CITY OF GREATER BENDIGO DS/539/2012 MCIVOR FOREST STAGE 19 DOWNING DRIVE JUNORTOUN SEWER RETIC LONGITUDINAL SECTIONS SME 18239	SCALE: AS SHOWN
DRAWN	K.ELDRIDGE	MELWAY REFERENCE	608 K10					SHEET: 4 OF 4
CHECKED	B.IBBS	AUTHORISED	B.IBBS					DRAWING No.: 304342CS300
		DATE:	13-11-17					REV C

1 2 3 4 5 6 7 8 9 10 11 12

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