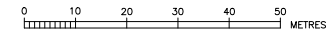


LOCALITY SKETCH AND ORIGIN OF LEVELS  
(NOT TO SCALE)



## DEVELOPER CONTRACT PLAN

- DENOTES PROPOSED ELECTRICAL SUBSTATION  
 ● DENOTES PROPOSED DRIVEWAY  
 \* DENOTES SERVICED BY CASE 162195WW

1. DESIGNER AND WATER SERVICING COORDINATOR:  
GALCHEK PTY LTD (CERTIFIED No.289)  
77 UNION RD, PENRITH NSW 2750  
PH. No. (02) 4722 8181

FOR: LEOPRO PTY LTD AT/ LEOPRO 54 PTY LTD  
LEVEL 27 - 19-29 MARTIN PLACE SYDNEY N.S.W 2000  
PH: 92521111

2. THE PROPOSED WORKS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SEWERAGE CODE OF AUSTRALIA WSA 02-2002-2.2 SYDNEY WATER EDITION VERSION 4 (2017) INCLUDING THE SYDNEY WATER SUPPLEMENT & APPENDICES. THE CONTRACTOR MUST HAVE A COPY OF THESE ON SITE AT ALL TIMES.

3. ALL STRUCTURES TO BE CONSTRUCTED TO PROPOSED FINISHED SURFACE LEVELS. ALL LEVELS REFER TO PROPOSED FINISHED SURFACE LEVEL. SEWER CONSTRUCTOR TO LIASE WITH ROAD AND/OR CIVIL CONTRACTOR TO VERIFY ALL LEVELS IN PARTICULAR IN OR ADJACENT TO ROADS. PROJECT SUPERVISOR/DESIGNER TO BE INFORMED OF ANY DISCREPANCIES.

4. ALL BUILDING LAYOUTS, FINISHED SURFACE LEVELS, STORMWATER INFORMATION, AND GENERAL CIVIL ENGINEERING DETAILS TAKEN FROM J.WINDHAM PRINCE ENGINEERING PLANS REFERENCE ISSUED FOR REVIEW PLANS 110358/02504 REGION 15 DATED OCTOBER 2017

5. THE MINIMUM NUMBER OF FIELD COMPACTION TESTS REQUIRED TO SATISFY THE SEWERAGE CODE OF AUSTRALIA ARE:  
IF SAND/CEMENT BACKFILL IS USED AT ROAD CROSSINGS, THE NUMBER OF TRENCHFILL COMPACTION TESTS MAY BE REDUCED BY 30 IF THE CONSTRUCTOR PROVIDES DOCUMENTATION FROM THEM SELF AND THE TESTING COMPANY STATING EXTENTS AND COMPLIANCE.

PIPE EMBEDMENT ZONE: 29 TESTS REQUIRED (SEE NOTES A & B)

TRENCH FILL ZONE (TRAFFICABLE): 30 TESTS REQUIRED

TRENCH FILL ZONE (NON TRAFFICABLE): 60 TESTS REQUIRED

TRENCH FILL ZONE (MAINTENANCE STRUCTURES): 129 TESTS REQUIRED

TRENCH FILL ZONE - TOTAL: 219 TESTS REQUIRED

PIPE EMBEDMENT COMPACTION

(NUMBER OF TESTS TO BE VERIFIED BY ACCREDITED FIELD TESTER. NUMBER ABOVE ARE A GUIDE ONLY.)

A). FOR RETICULATION SEWERS (UP TO DN300), NO COMPACTION TEST IS REQUIRED PROVIDED THAT 7mm, 10mm OR 14mm NOMINAL SINGLE-SIZE AGGREGATES ARE PLACED, SPREAD, AND TAMPED IN LAYERS NOT GREATER THAN 200mm TO FILL UP ALL THE VOIDS AROUND THE PIPE. SYDNEY WATER APPROVAL IS REQUIRED FOR SEWERS LARGER THAN DN300 PRIOR TO CONSTRUCTION. THE CONSTRUCTOR IS REQUIRED TO PROVIDE EVIDENCE THAT THE CORRECT SIZE AGGREGATE HAS BEEN USED OVER THE ENTIRE TRENCH AREA. THIS MAY BE IN THE FORM OF DELIVERY DOCKETS.

B). IF EMBEDMENT MATERIAL OTHER THAN SINGLE-SIZE AGGREGATES ARE USED, COMPACTION TESTS EITHER IN THE FORM OF PRE-QUALIFICATION TESTING OR IN SITU TESTING AS NOMINATED IN THE CODE SHALL BE UNDERTAKEN FOR ALL SEWERS.

NOTE: A HIGHER LEVEL OF COMPACTION MAY BE REQUIRED TO COMPLY WHICH THE CONSTRUCTOR WILL HAVE TO LIASE WITH THE CIVIL CONTRACTOR OR COUNCILS SPECIFICATION.

6. ALL LEVELS ELECTRONICALLY GENERATED. NO LEVEL BOOK AVAILABLE.

7. THE REVIEW OF ENVIRONMENTAL FACTORS IS AN INTEGRAL PART OF THIS DESIGN AND MUST BE READ IN CONJUNCTION WITH THIS PLAN.

8. PRIOR TO ANY EXCAVATION THE CONSTRUCTOR MUST HAVE A CURRENT COPY OF THE UNDERGROUND SERVICES REPORT WHICH IS TO BE READ IN CONJUNCTION WITH THIS PLAN.

9. SERVICES SHOWN FROM 'DIAL BEFORE YOU DIG' SERVICES SEARCH ARE INDICATIVE ONLY. AUTHENTICITY AND ACCURACY SHOULD NOT BE PRESUMED AND SHOULD BE CONFIRMED BY THE CONSTRUCTOR PRIOR TO ANY EXCAVATION WORKS ON SITE.

10. BUILDING OVER/ADJACENT TO SEWER - CONDITIONS MAY APPLY. REFER TO GALCHEK FOR DETAILS.

11. ALL EXCAVATION, SHORING EXCAVATION AND STABILITY OF ADJACENT STRUCTURES/SERVICES/TWELINGS IS THE RESPONSIBILITY OF THE CONSTRUCTOR. USE OF SHORING BOXES IS NOT A FORM OF STABILITY CONTROL. NEITHER IS SAND CEMENT BACKFILL OR CONCRETE ENCASUREMENT.

12. ALL JUNCTIONS FOR THE PCS'S ARE TO BE LOCATED 0.7m MIN. OFF THE DOWNSTREAM PROPERTY BOUNDARY (CURRENT AND FUTURE) OR DOWNSTREAM EASEMENT BOUNDARY OR 1.0m MIN. OFF THE DOWNSTREAM STRUCTURE.

□ DENOTES STANDARD PCS CONNECTION (REFER DTC-2120 ISSUE A DATE 18.03.15)

13. IT IS THE CONSTRUCTORS RESPONSIBILITY TO PROVIDE THE CHANGES FOR THE PCS'S, THE LENGTH OF THE PCS'S, THE TYPE OF CONNECTION USED, THE LENGTH OF THE IO AND THE INVERT LEVEL AT THE PCP (IF APPLICABLE) TO THE WSC FOR WORK AS CONSTRUCTED PURPOSES.

14. THE TOTAL LENGTH OF THE DN100 PCS'S EXCLUDING RISERS IS APPROXIMATELY 117m. PCS'S TO HAVE MINIMUM STIFFNESS RATING OF SN10. JOINTING TO BE SOLVENT WELDED.

15. CONSTRUCTOR TO ENSURE THAT WORKS ARE CONSTRUCTED IN ACCORDANCE WITH SYDNEY WATER'S DEEMED TO COMPLY DRAWINGS:

- FOR ALL M/S'S DTC-2000 (ISSUE C 18-03-15), DTC-2220 (ISSUE D 18-03-15), DTC-2221 (ISSUE B 01.03.13), DTC-2222 (ISSUE C 18-03-15),

- FOR MH'S WHERE DEPTH TO IL IS 1.2m-6m, SEWERS =DN300 OR <DN300 IN A RESIDENTIAL AREA NOT SUBJECT TO VEHICULAR WHEEL LOADS USE DTC-2203 (ISSUE B 18-03-15)

16. PIPES TO BE CONCRETE ENCASED SHOWN ACCORDINGLY: REFER TO SEW-1205-V

EACH SECTION OF PIPE SHALL BE CONCRETE ENCASED IN THE FOLLOWING MANNER  
EACH PIPE JOINT REQUIRES A 12mm THICK COMPRESSIBLE MEMBRANE TO BE INSERTED  
EACH PIPE JOINT IS REQUIRED TO HAVE 2 R10 DOWEL PINS, ONE EITHER SIDE OF THE PIPE.  
DOWEL PINS ARE TO BE CENTRALLY PLACED IN CONCRETE WITH A MINIMUM BAR LENGTH OF 600mm  
THE DOWEL PIN IS TO BE EITHER GALVANISED OR STAINLESS STEEL.  
AT THE ENDS OF EACH SECTION OF ENCASEMENT A 600mm ROCKER PIPE IS TO BE INSTALLED.

17. AREAS HATCHED THUS NOT DRAINED: □

18. ALL M.S.'s TO CONFORM TO WSA-137, "INDUSTRY STANDARD FOR MAINTENANCE SHIFTS AND MAINTENANCE CHAMBERS FOR SEWERAGE".

B	LINE 8 & 10 AMENDED DUE TO BASIN UPGRADE	M.P.	15.02.18
A	ISSUED FOR REVIEW	M.P.	22.11.17

No.	AMENDMENT DESCRIPTION	BY	DATE
PLAN TO BE READ IN CONJUNCTION WITH CURRENT SYDNEY WATER STANDARDS - SYDNEY WATER CORPORATION			
PRIOR TO COMMENCEMENT OF EXCAVATION FOR PROPOSED AND EXISTING SERVICES CONTACT -			
DIAL BEFORE YOU DIG	PH: 1100		
ELECTRICITY INDICATOR ENERGY	PH: 131 503		
GAS - JEMENA GAS	PH: 1300 880 800		
TELECOMMUNICATIONS - TELSTRA	PH: 1800 114 919		
SYDNEY WATER	PH: 132 092		
GIVING AT LEAST 48 HOURS NOTICE			

FILE LOCATION: PM19185WW-B

DESIGNED: M.P.

DRAFTED: M.P.

VERIFIED: C.T.

REVIEWED: C.T.

APPROVED: C.T.

ISSUED: 15-02-2018

## WORK AS CONSTRUCTED CERTIFICATION

DEVELOPER  
WATER SERVICE CO-ORDINATOR  
CONSTRUCTOR  
COMPLETED  
DESIGNER

I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS.

## PIPE SCHEDULE

SIZE	TYPE	CLASS	LENGTH	PIPE JOINING METHOD/NOTES
150	U.P.V.C.	SN8	1905.00	
100	U.P.V.C.	SN10	117	

DESIGNER: M

NO BOUNDARY TRAPS REQUIRED.

## AUSTRALIAN HEIGHT DATUM

SCALES

PLAN 1:500 SECTION 1:500

CROSS SECTIONS 1:125

VERT. 1:125

NATURAL

LENGTHS, DEPTHS &amp; LEVELS ARE IN METRES

NO AMENDMENTS ARE TO BE MADE TO THIS PLAN WITHOUT REFERENCE TO SYDNEY WATER. THIS PLAN IS NOT NECESSARILY UP TO DATE OR CORRECT AND SYDNEY WATER ACCEPTS NO RESPONSIBILITY.

U.S. DIRECTORY 184 K4 (42nd Ed.)

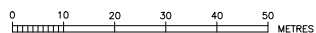
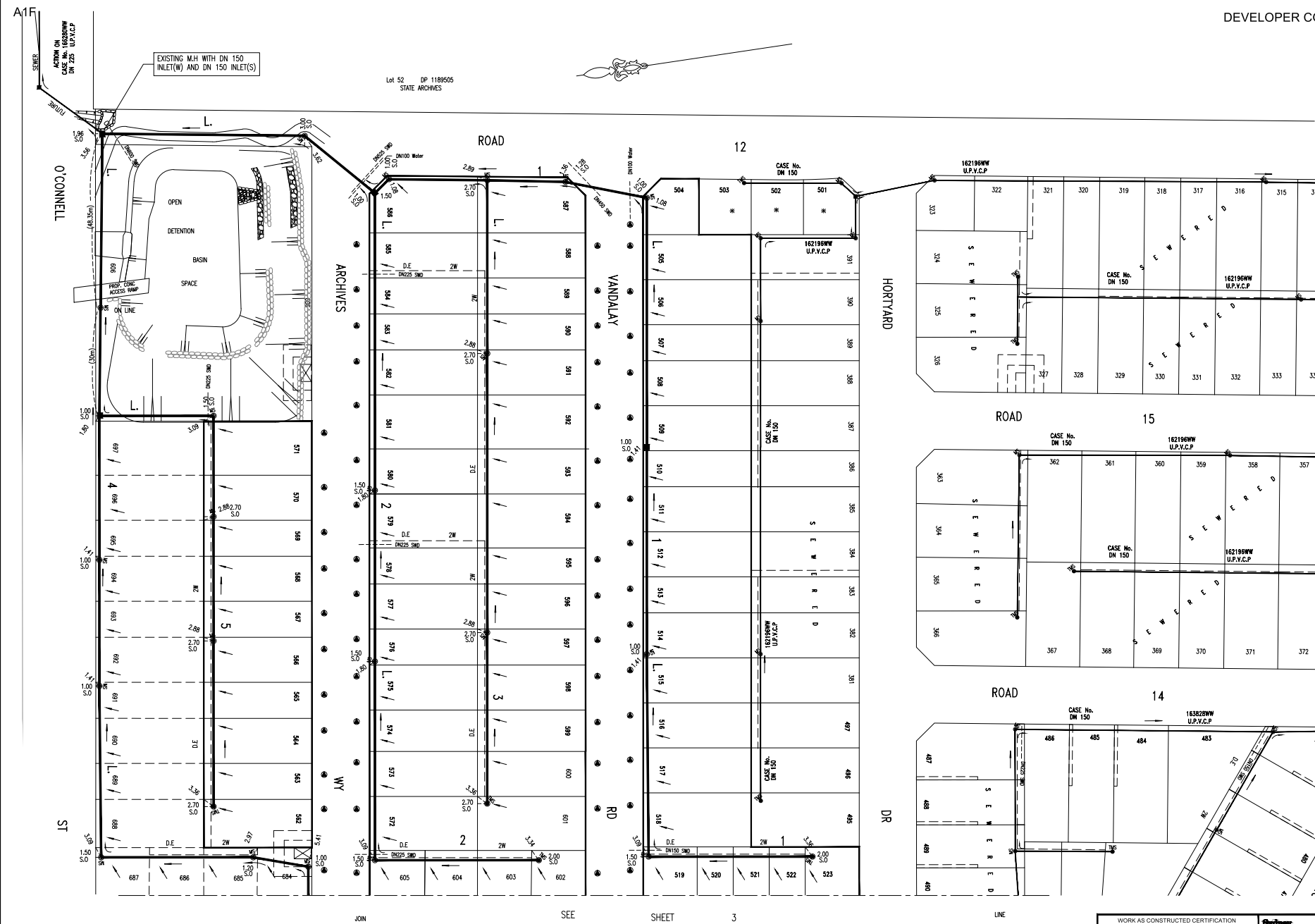
SHEET 1 OF 7

File No. N/A

SYDNEY WATER CORPORATION


**Case No. 163996WW**

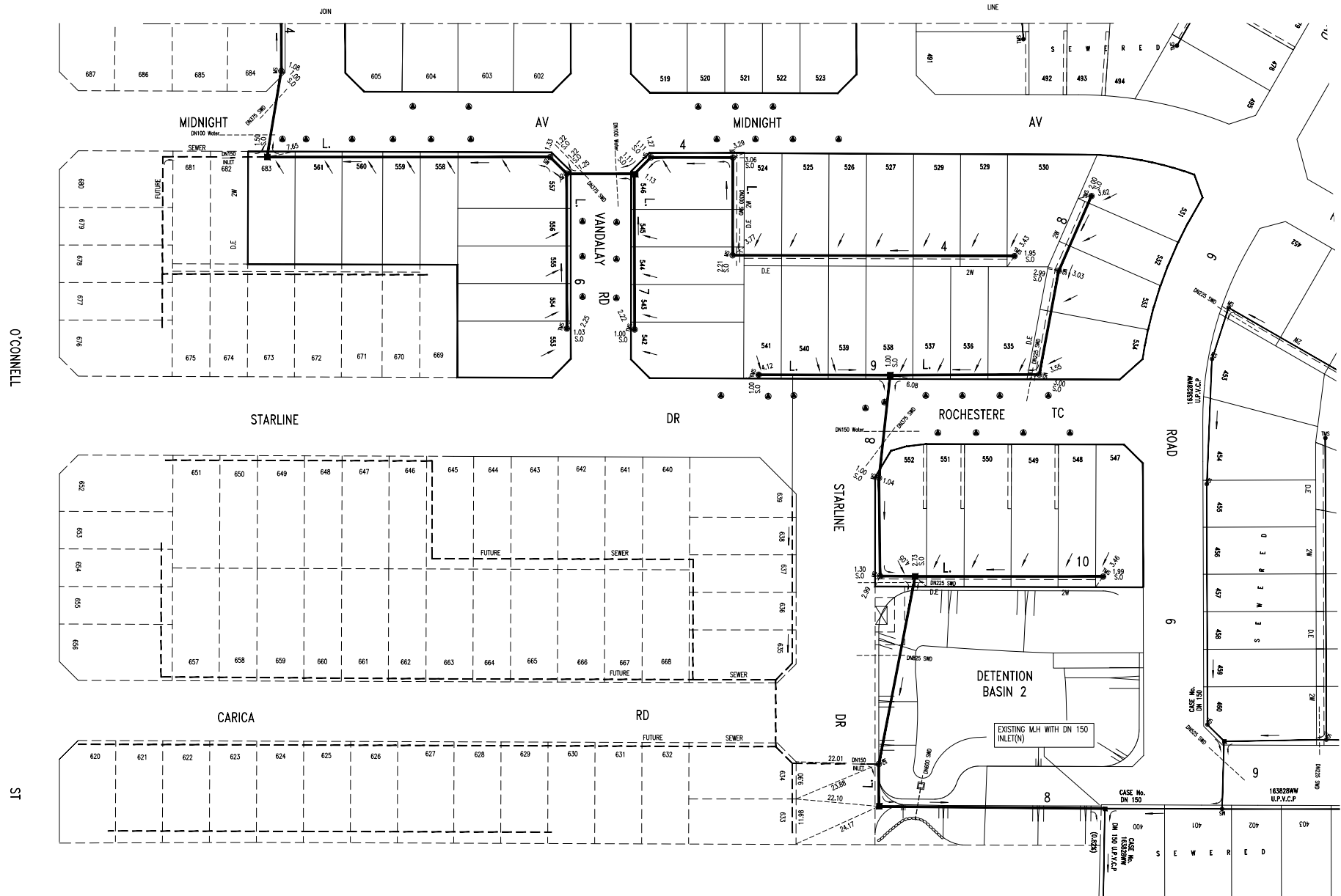
**PENRITH SEWERAGE DRAINS TO ST MARYS S.T.0011**



B	LINE 8 & 10 AMENDED DUE TO BASIN UPGRADE	M.P.	15.02.18
A	ISSUED FOR REVIEW	M.P.	22.11.17
No.	AMENDMENT DESCRIPTION	BY	DATE

FILE LOCATION: PM19185WW-B      DESIGNED: M.P.      DRAFTED: M.P.      VERIFIED: C.T.      REVIEWED: C.T.      APPROVED: C.T.      ISSUED: 15-02-2018

WORK AS CONSTRUCTED CERTIFICATION		 SYDNEY WATER CORPORATION	
DEVELOPER W.S.C.		Case No. 163996WW SHT 2 OF 7 SHTS.	
CONSTRUCTOR COMPLETED			
W.A.C. PREPARED			
DESIGNER			
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS		SYDNEY WATER CORPORATION	
		FOR DETAILS OF SERVICES SEE SHEET 1	



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No.	AMENDMENT DESCRIPTION	BY	DATE

FILE LOCATION: PM19185WW-B

DESIGNED: M.P.

DRAFTED: M.P.

VERIFIED: C.T.

REVIEWED: C.T.

APPROVED: C.T.

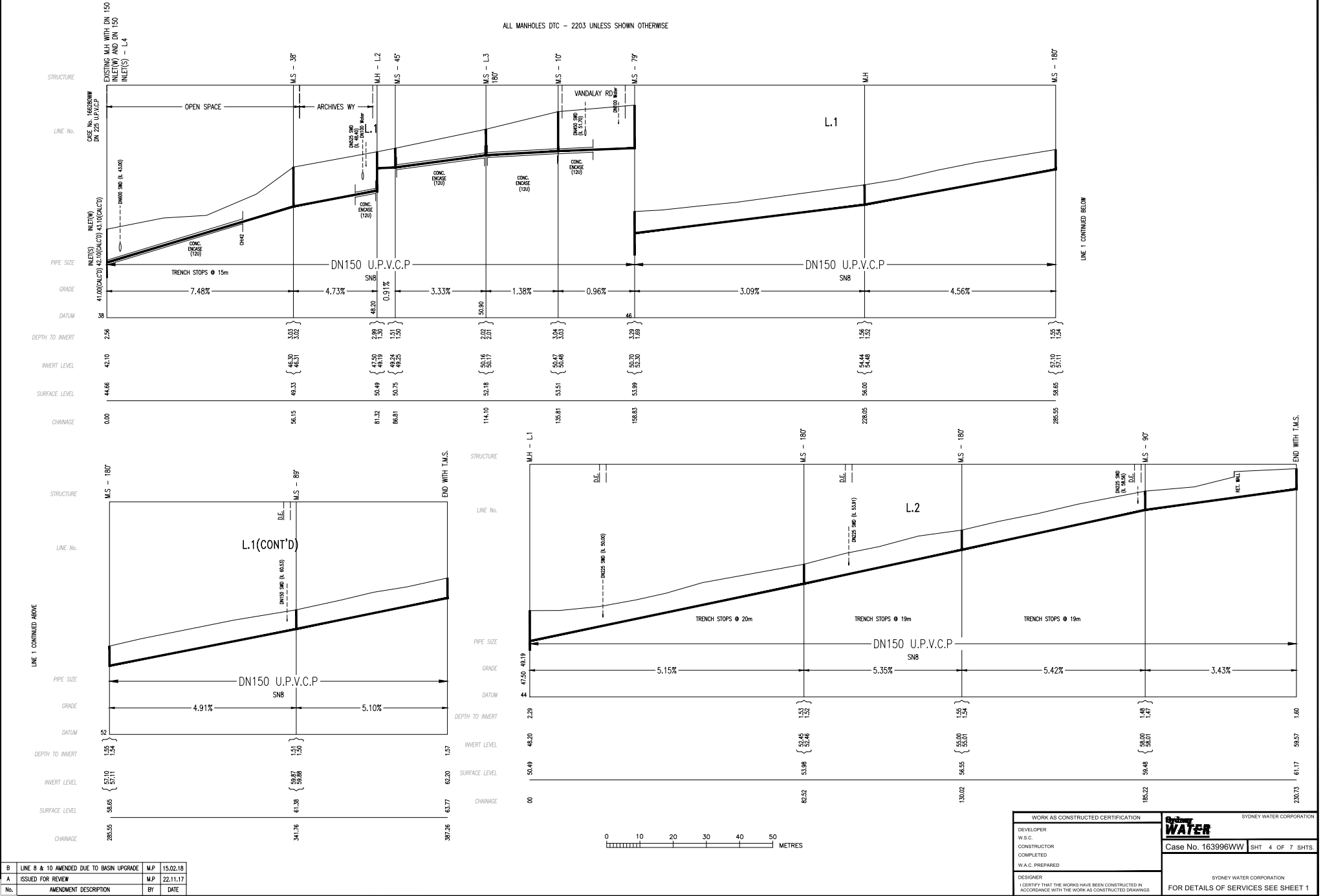
ISSUED: 15-02-2018

0 10 20 30 40 50 METRES



WORK AS CONSTRUCTED CERTIFICATION		SYDNEY WATER CORPORATION	
DEVELOPER	W.S.C.	CONTRACTOR	COMPLETED
W.A.C. PREPARED	DESIGNER	SYDNEY WATER CORPORATION	
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS		FOR DETAILS OF SERVICES SEE SHEET 1	

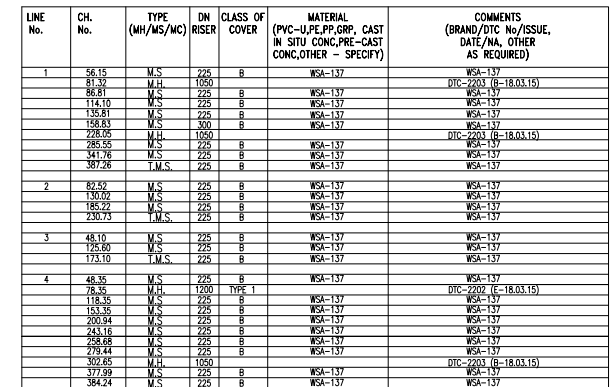
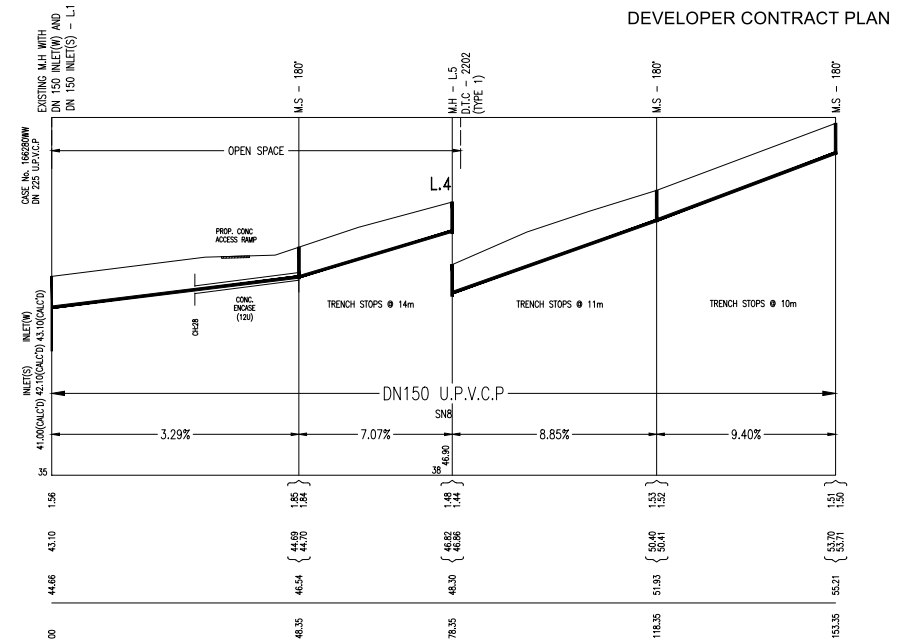
<b>SYDNEY WATER</b>	Case No. 163996WW	SHT 3 OF 7 SHTS.
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No.	AMENDMENT DESCRIPTION	BY	DATE

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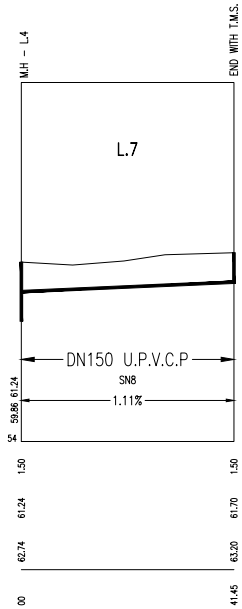
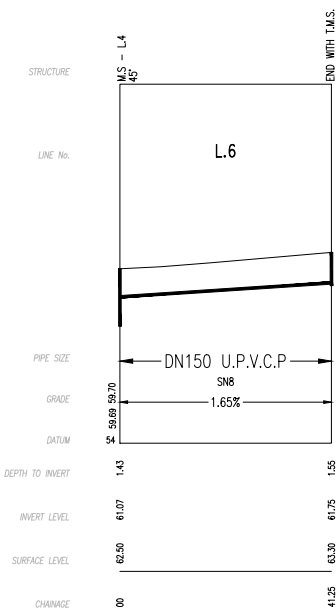
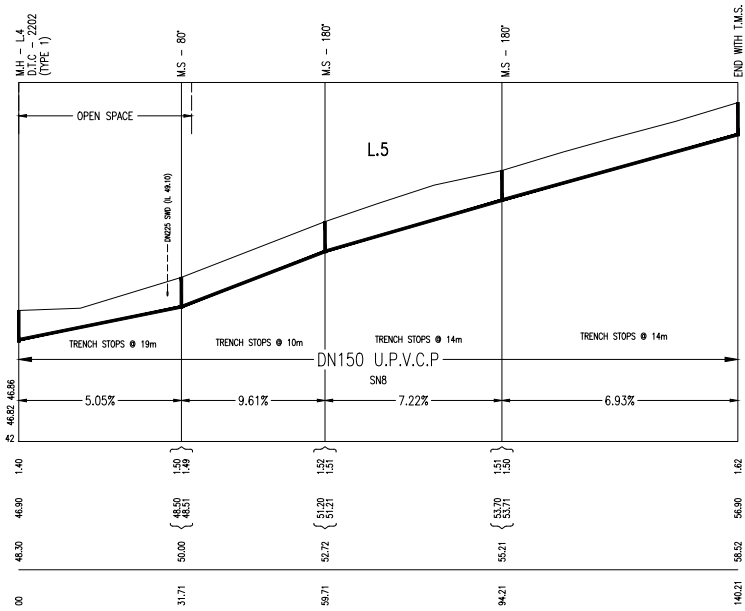
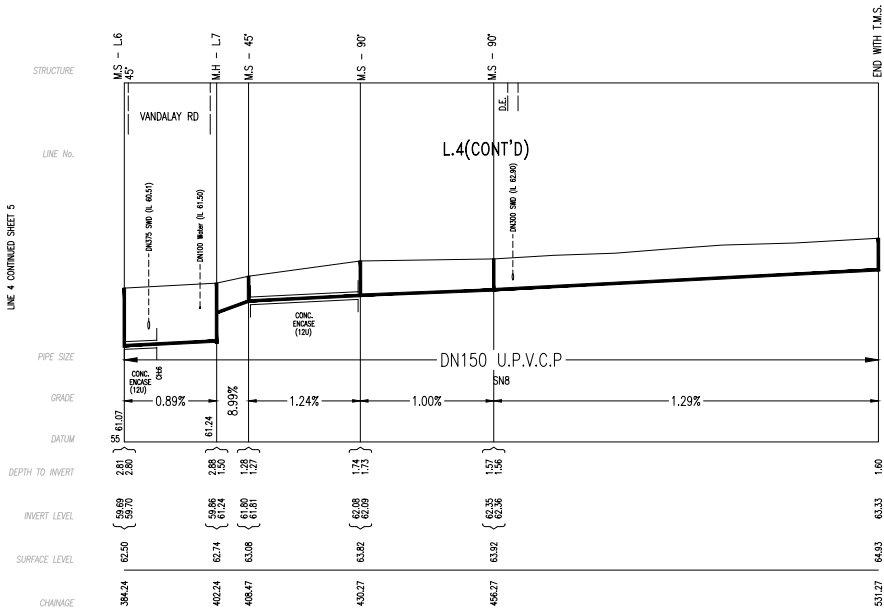
WORK AS CONSTRUCTED CERTIFICATION	SYDNEY WATER CORPORATION
DESIGNER	Case No. 163996WWV SHT 4 OF 7 SHTS
W.S.C.	
CONSTRUCTOR	
COMPLETED	
W.A.C. PREPARED	
DESIGNER	SYDNEY WATER CORPORATION
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS	FOR DETAILS OF SERVICES SEE SHEET 1



LINE 4 CONTINUED SHEET 6

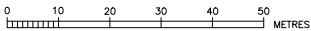
WORK AS CONSTRUCTED CERTIFICATION		 SYDNEY WATER CORPORATION	
DEVELOPER		Case No. 163996VWV <div>SHT 5 OF 7 SHTS.</div>	
W.S.C			
CONSTRUCTOR			
COMPLETED			
W.A.C. PREPARED			
DESIGNER		SYDNEY WATER CORPORATION	
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS		FOR DETAILS OF SERVICES SEE SHEET 1	

ALL MANHOLES DTC - 2203 UNLESS SHOWN OTHERWISE



LINE No.	CH. No.	TYPE (MH/MS/MC)	DN RISER	CLASS OF COVER	MATERIAL (PVC-U, PE, PP, GRP, CAST IN SITU CONC, PRE-CAST CONC, OTHER - SPECIFY)	COMMENTS (BRAND/DTC No/ISSUE, DATE/NA, OTHER AS REQUIRED)
4 (CONT'D)	402.24	M.H.	1050			DTC-2203 (B-18.03.15)
	408.47	M.S.	225	B	WSA-137	WSA-137
	430.27	M.S.	225	B	WSA-137	WSA-137
	456.27	M.S.	225	B	WSA-137	WSA-137
	531.27	T.M.S.	225	B	WSA-137	WSA-137
5	31.71	M.S.	225	B	WSA-137	WSA-137
	59.71	M.S.	225	B	WSA-137	WSA-137
	94.21	M.S.	225	B	WSA-137	WSA-137
	140.21	T.M.S.	225	B	WSA-137	WSA-137
6	41.25	T.M.S.	225	B	WSA-137	WSA-137
7	41.45	T.M.S.	225	B	WSA-137	WSA-137

CONTINUED SHEET 7



B	LINE 8 & 10 AMENDED DUE TO BASIN UPGRADE	M.P.	15.02.18
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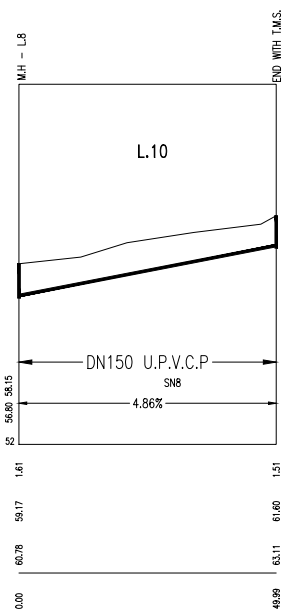
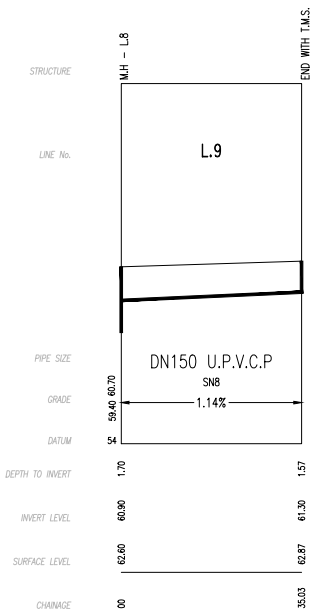
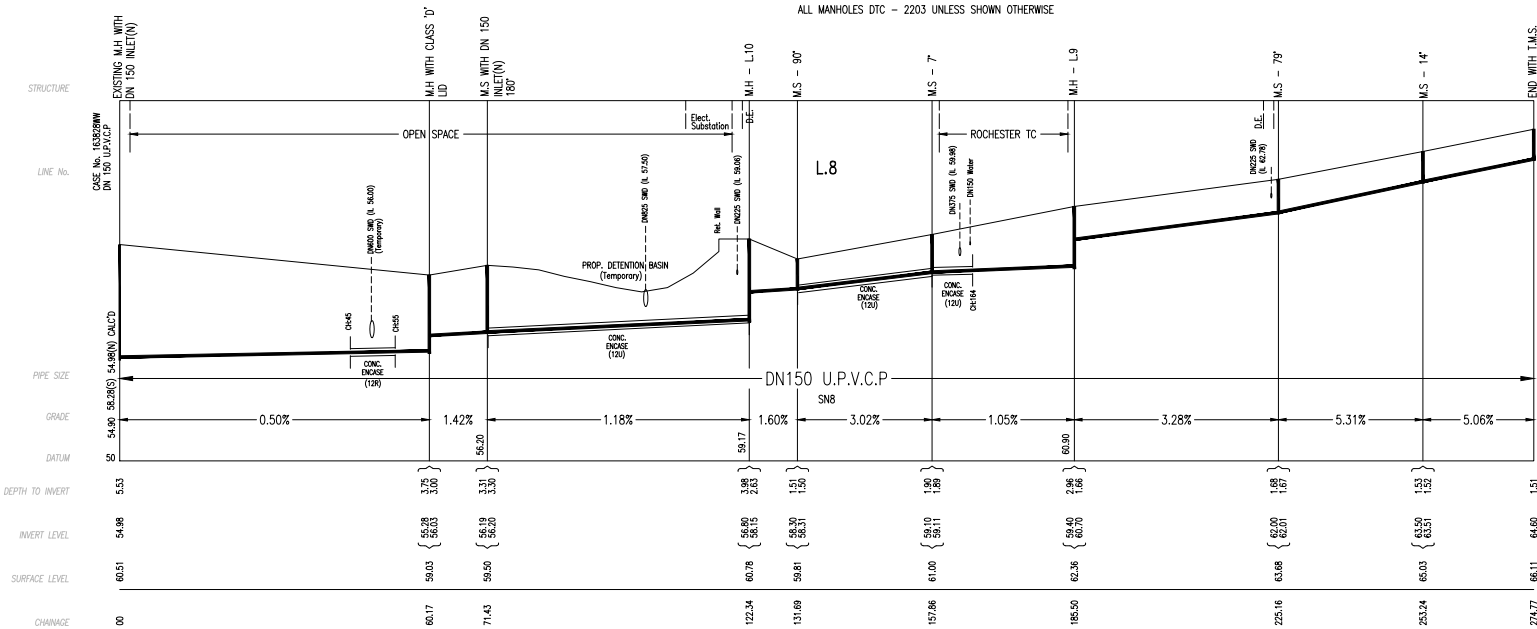
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REVIEWED: C.T.

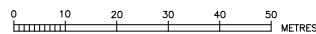
APPROVED: C.T.

ISSUED: 15-02-2018

WORK AS CONSTRUCTED CERTIFICATION		SYDNEY WATER CORPORATION	
DEVELOPER	W.S.C.		
CONSTRUCTOR	COMPLETED		
W.A.C. PREPARED		Case No. 163996WW SHT 6 OF 7 SHTS.	
DESIGNER		SYDNEY WATER CORPORATION	
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS		FOR DETAILS OF SERVICES SEE SHEET 1	



LINE No.	CH. No.	TYPE (MH/MS/MC)	DN RISER	CLASS OF COVER	MATERIAL (PVC-U, PE, PP, GRP, CAST IN SITU CONC, PRE-CAST CONC, OTHER - SPECIFY)	COMMENTS (BRAND/DTC No/ISSUE, DATE/NA, OTHER AS REQUIRED)
8	60.17	M.H.	1050	D		DTC-2203 (B-18.03.15)
	71.43	M.S.	225	B	WSA-137	WSA-137
	122.34	M.H.	1050	B		DTC-2203 (B-18.03.15)
	131.69	M.S.	225	B	WSA-137	WSA-137
	157.86	M.S.	225	B	WSA-137	WSA-137
	185.50	M.H.	1050	B		DTC-2203 (B-18.03.15)
	225.16	M.S.	225	B	WSA-137	WSA-137
9	253.24	M.S.	225	B	WSA-137	WSA-137
	274.77	T.M.S.	225	B	WSA-137	WSA-137
10	35.03	T.M.S.	225	B	WSA-137	WSA-137
	59.69	T.M.S.	225	B	WSA-137	WSA-137



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WORK AS CONSTRUCTED CERTIFICATION		SYDNEY WATER CORPORATION	
DEVELOPER	W.S.C.	CONSTRUCTOR	COMPLETED
W.A.C. PREPARED		DESIGNER	
		I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS	
		SYDNEY WATER CORPORATION	
		FOR DETAILS OF SERVICES SEE SHEET 1	