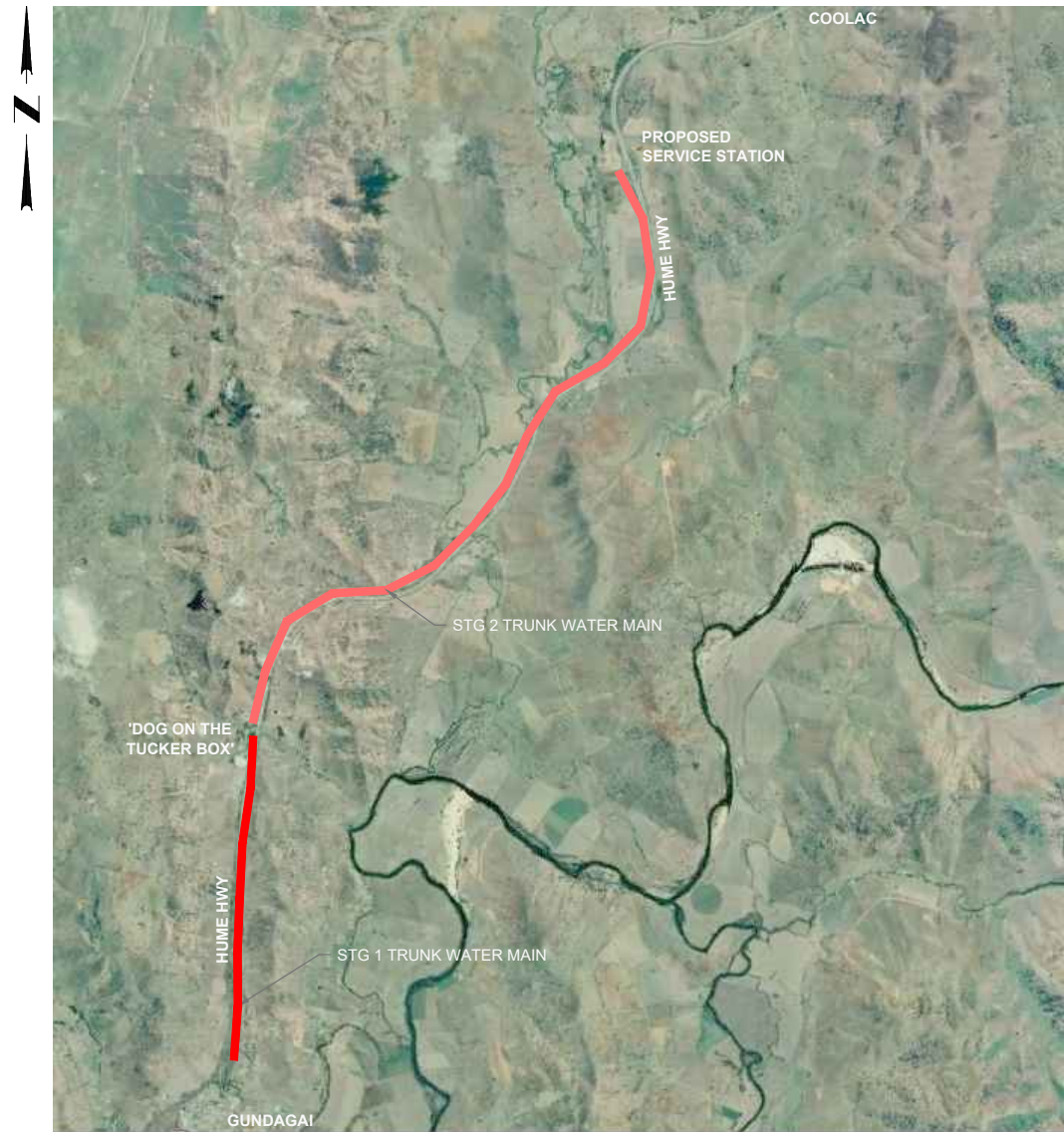


COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL

GUNDAGAI TO FIVE MILE TRUNK WATER MAIN

STAGE 1



LOCALITY PLAN
NOT TO SCALE

PROPOSED TRUNK WATER MAIN - 2019

DESIGN FILE No: CE18119
DESIGN STANDARD: SYDNEY WSAA-03 & TNSW DESIGN GUIDELINES

GENERAL

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS.
- BEFORE PROCEEDING WITH THE WORK ANY DISCREPANCIES IN THE CONTRACT DOCUMENTS SHALL BE REFERRED FOR DECISION TO THE SUPERINTENDENT.
- DO NOT SCALE FROM DRAWINGS.
- CONTRACTOR SHALL VERIFY ALL LOCATIONS OF SERVICES, ALL DIMENSIONS AND LEVELS PRIOR TO CONSTRUCTION.
- ALL MATERIALS/CONSTRUCTION & WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS AND STANDARD DRAWINGS AND BY-LAWS.
- THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL RELEVANT APPROVALS PRIOR TO COMMENCEMENT OF WORKS.
- UNDERGROUND SERVICE LOCATIONS SHOWN ON THIS PLAN HAVE BEEN DETERMINED BY FIELD SURVEY AND/OR OFFICE RECORDS, AND MAY NOT REPRESENT ALL SERVICES OR EXACT LOCATIONS. THE CONTRACTOR MUST ACCURATELY LOCATE AND DEPTH ALL SERVICES LIKELY TO BE ENCOUNTERED DURING CONSTRUCTION, PRIOR TO COMMENCING ANY EXCAVATION WORKS.
- DISPERSIVE SOILS ARE NOT TO BE USED AS FILL/EMBANKMENT MATERIAL. ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH CURRENT WSAA SPECIFICATIONS AND TECHNICAL STANDARDS.

CONSTRUCTION SPECIFICATIONS

WATER SERVICES ASSOCIATION OF AUSTRALIA:
WSA 03 SYDNEY WATER PART 2 - WATER SUPPLY CODE OF AUSTRALIA

STANDARD DRAWINGS

SYDNEY WATER WSA-03 STD DRGS	
WAT-1106-V	PROPERTY SERVICES - SINGLE SERVICE MAIN TO METER
WAT-1108-V	PROPERTY SERVICES - CONNECTION TO MAIN
WAT-1201	EMBEDMENT & TRENCH FILL - TYP ARRANGEMENT
WAT-1202-V	STD EMBEDMENT - ALL PIPE TYPES
WAT-1203	SPECIAL EMBEDMENT - INADEQUATE & POOR FOUNDATION
WAT-1204-V	SPECIAL EMBEDMENT - CONC, GEOTEXTILE & CEMENT STABILISED
SYSTEMS	
WAT-1205	THRUST BLOCK DETAILS
WAT-1207-V	THRUST & ANCHOR BLOCKS - GATE VALVES & VERT. BENDS
WAT-1212-V	BURIED CROSSINGS - MAJOR ROADWAYS
WAT-1214-V	BURIED CROSSINGS - BORED & JACKED ENCASING PIPE DETAILS
WAT-1250-S	STD TRENCH DETAIL DN100-375 MAINS
WAT-1301-S	TYP. VALVE & HYDRANT INSTALLATION
WAT-1302-V	TYP. VALVE & HYDRANT INSTALLATION
WAT-1303-V	TYP. SURFACE FITTING INSTALLATION - SLUICE VALVES
WAT-1304-V	TYP. SURFACE FITTING INSTALLATION - SLUICE VALVES
WAT-1305-V	TYP. SURFACE FITTING INSTALLATION - HYDRANTS
WAT-1306-V	TYP. SURFACE FITTING INSTALLATION - HYDRANTS
WAT-1310	AERIAL CROSSING - AQUEDUCT
WAT-1311	AERIAL CROSSING - PROTECTION GRILLE
WAT-1352-S	MARKING SYSTEMS - HYDRANTS
WAT-1353-S	MARKING SYSTEMS - VALVES
WAT-1400	TYP. STEEL PIPE JOINTING - BUTT WELD

DRAWING SCHEDULE

Document Title	Document No.
COVER SHEET & LOCALITY PLAN & DRG SCHEDULE	CE18119.1-001-CO
LEGEND & GENERAL NOTES	CE18119.1-002-CO
GENERAL DETAILS SHEET 1 OF 3	CE18119.1-101-GE
GENERAL DETAILS SHEET 2 OF 3	CE18119.1-102-GE
GENERAL DETAILS SHEET 3 OF 3	CE18119.1-103-GE
GENERAL ARRANGEMENT SHEET 1 OF 10	CE18119.1-201-GA
GENERAL ARRANGEMENT SHEET 2 OF 10	CE18119.1-202-GA
GENERAL ARRANGEMENT SHEET 3 OF 10	CE18119.1-203-GA
GENERAL ARRANGEMENT SHEET 4 OF 10	CE18119.1-204-GA
GENERAL ARRANGEMENT SHEET 6 OF 10	CE18119.1-206-GA
GENERAL ARRANGEMENT SHEET 7 OF 10	CE18119.1-207-GA
GENERAL ARRANGEMENT SHEET 8 OF 10	CE18119.1-208-GA
GENERAL ARRANGEMENT SHEET 9 OF 10	CE18119.1-209-GA
GENERAL ARRANGEMENT SHEET 10 OF 10	CE18119.1-210-GA
CONTROL SET-OUT	CE18119.1-301-CS

DETAIL SURVEY BY:
PRELIMINARY ALIGNMENT CORRIDOR: ALLSPEC & PARTNERS
DATE SURVEYED 11/07/18
SURVEY: MGA94 ZONE 55
DETAILED ANNIE PYERS DR: SHAW SURVEYORS P/L
DATE SURVEYED 27/05/20
SURVEY: MGA94 ZONE 55
STANDARD DRAWINGS PRECEDENT:
CGRC STANDARD DESIGN DRAWINGS, SYDNEY WATER STD
DRAWINGS & SPECIFICATIONS, RMS GUIDELINES & INSTITUTE
OF PUBLIC WORKS ENGINEERING AUSTRALIA (IPWEA)

www.dialbeforeyoudig.com.au
ALL UNDERGROUND SERVICES
SHOULD BE LOCATED ON SITE
BEFORE ANY WORK IS COMMENCED

DIAL 1100
BEFORE YOU DIG

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS	DESIGN CHECK	COPYRIGHT © MOLONEY SOLUTIONS PTY LTD 2019 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.	JAS-SANZ ISO 9001	DATUM	PROJECT No. CE18119.1	APPROVED FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING	CLIENT COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL	PROJECT GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1	 EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE GOLD COAST • COFFS HARBOUR • SYDNEY	DRAWING TITLE COVER SHEET & LOCALITY PLAN & DRAWING SCHEDULE		
	A	LM	JO											11/19	CONCEPT DESIGN ISSUE	DRAWN CHECK
	B	LM	JO											25/05/20	PRELIMINARY DESIGN ISSUE	
	C	LM	JO											04/09/20	DETAILED DESIGN ISSUE	
													DRAWING NUMBER CE18119.1-001-CO	ISSUE C		

PROPOSED

EXISTING SURVEY

ABBREVIATIONS:

CODE IDENTIFIER

GENERAL:

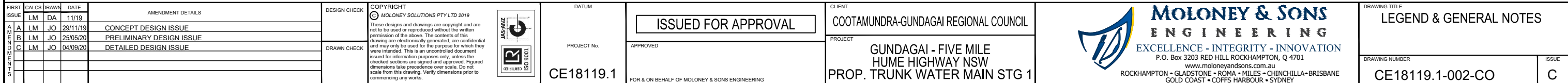
- ### PROPOSED WATER WORKS:

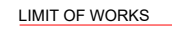
- ### EARTHWORKS:

- ENVIRONMENT:

- REINSTATEMENT:

1. UNLESS STATED OTHERWISE ALL EXISTING INFRASTRUCTURE AFFECTED BY THESE WORKS SHALL BE REINSTATED IN ACCORDANCE WITH THE RELEVANT STANDARD SPECIFIED IN THE COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL GUIDELINES. THE FOLLOWING REINSTATEMENT REQUIREMENTS SHALL BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS.





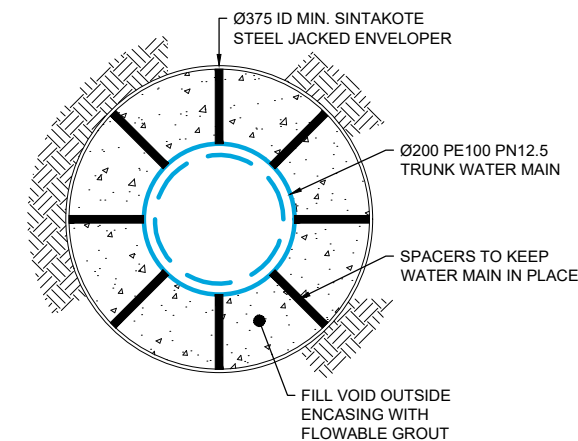
DETAIL A

N.T.S



DETAIL B

N.T.S



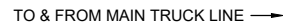
TYPE X TRENCH SUPPORT
(PIPE IN ENVELOPER)
N.T.S

DETAIL 'A' SCHEDULE OF QUANTITIES





NUMBER	MATERIAL/DESCRIPTION	QTY
01	DN200 FL-FL PN16 AVK RESILIENT SEATED VALVE	2
02	DN200 DICL FL-FL PN16 PIPE (1.0m)	2
03	DN200 FL-FL 90° BEND	2
04	DN200 SO-SO 90° BEND	4
05	DN200 PVC-U PN18 PIPE	-
06	DN200 DICL FL-SP PN16 PIPE (CUT TO SUIT)	-

DETAIL 'B' SCHEDULE OF QUANTITIES

NUMBER	MATERIAL/DESCRIPTION	QTY
01	DN200 PVC-U PN18 PIPE	-
02	DN200 PE100 PN16 PIPE W/STEEL ENVELOPER REFER LONGITUDINAL SECTION FOR DETAILS	-
03	DN200 SO-SO 90° BEND	1
04	DN200 AVK GATE VALVE 01/71 W/ 2/ AVK SUPPORT BUSHES & ANCHOR BLOCK (OMITTED FOR CLARITY)	1
05	DN200 ELECTROFUSION COUPLING JOINT	2



VIEW A-A
N.T.S

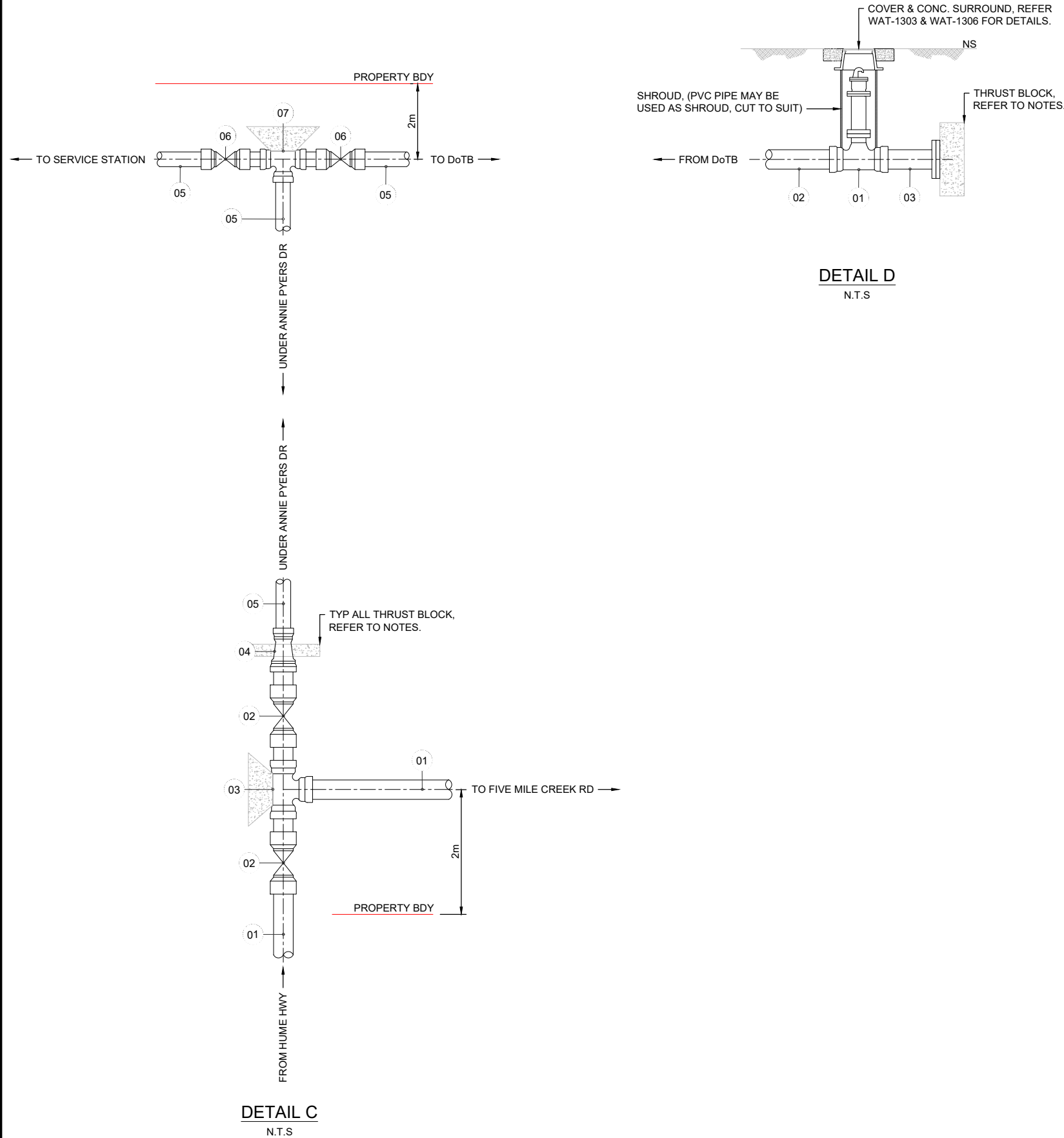
FIRST ISSUE			CLCS	DRAWN	DATE	AMENDMENT DETAILS		DESIGN CHECK	COPYRIGHT © MOLONEY SOLUTIONS PTY LTD 2019 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.						CLIENT COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL		 MOLONEY & SONS ENGINEERING EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE GOLD COAST • COFFS HARBOUR • SYDNEY		DRAWING TITLE GENERAL DETAILS SHEET 1 OF 3	
AMENDMENTS			A	LM	DA	11/19							PROJECT No.		PROJECT		DRAWING NUMBER		ISSUE	
			B	LM	JO	29/11/19	CONCEPT DESIGN ISSUE				CE18119.1		APPROVED		GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1		CE18119.1-101-GE		C	
			C	LM	JO	25/05/20	PRELIMINARY DESIGN ISSUE													
				LM	JO	04/09/20	DETAILED DESIGN ISSUE		DRAWN CHECK											

DETAIL 'C' SCHEDULE OF QUANTITIES

NUMBER	MATERIAL/DESCRIPTION	QTY
01	DN200 PVC-U PN18 PIPE	-
02	DN200 AVK GATE VALVE 01/71 W/ 2/ AVK SUPPORT BUSHES & ANCHOR BLOCK (OMITTED FOR CLARITY)	2
03	DN200 SO-SO TEE	1
04	DN200-110 REDUCER	1
05	DN110 PE100 PN16 PIPE	-
06	DN110 AVK GATE VALVE 01/71 W/ 2/ AVK SUPPORT BUSHES & ANCHOR BLOCK (OMITTED FOR CLARITY)	2
07	DN110 SO-SO TEE	1

DETAIL 'D' SCHEDULE OF QUANTITIES

NUMBER	MATERIAL/DESCRIPTION	QTY
01	DN200 PVC-U PN18 PIPE	-
02	DN200 SO-SO-FL HYDRANT TEE	1
03	DN200 FL-SP PVC-U PN18 PIPE W/BLANK FLANGE	-



IMPORTANT

IN ACCORDANCE WITH PIPA INDUSTRY GUIDELINES FOR PVC, PP & PE PIPELINE INSTALLATION ON CURVED ALIGNMENT, THE MINIMUM BEND RADII OF "15 x DN" SHALL BE ADOPTED.

GENERAL

- FOR NOTES, & LEGEND DETAILS, REFER TO DRG 002-GA
- FOR TYP. PVC WATER MAIN ARRANGEMENT DETAILS, REFER TO WSA STD DRG WAT-1102-V
- FOR THRUST BLOCK DETAILS REFER TO WSA STD DRG WAT-1205
- FOR IN-LINE THRUST BLOCK DETAILS, REFER TO WSA STD DRG WAT-1206
- FOR VERTICAL BEND THRUST BLOCK DETAILS, REFER TO WSA STD DRG WAT-1207-V

REV	FIRST ISSUE			DATE	AMENDMENT DETAILS	DESIGN CHECK	DRAWN CHECK	COPYRIGHT	DATUM	PROJECT No.	ISSUED FOR APPROVAL	APPROVED	CLIENT	PROJECT	DRAWING TITLE	DRAWING NUMBER	ISSUE
	LM	DA	11/19														
A	LM	JO	04/09/20		DETAILED DESIGN ISSUE					CE18119.1			COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL	GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1	GENERAL DETAILS SHEET 2 OF 3	CE18119.1-102-GE	A

NOTES:

- ALL DIMENSION IN MILLIMETRES.
- MAXIMUM HEIGHT "H" OF CONCRETE PIERS TO BE 2100.
- FOOTING HAS BEEN DESIGNED ASSUMING THE FOLLOWING PARAMETRES:
 - GEOTECHNICAL FACTOR Ø: 0.4
 - SKIN FRICTION FACTOR: 40 kPa
 - ULTIMATE BASE BEARING PRESSURE: 800 kPa
 - PIERS FULLY SUBMERGED & SUBJECT TO 3.0m/s FLOOD VELOCITY.
- ANCHORS TO PROVIDE 15kN MIN. EACH ONE, AND CONSTRUCTED & TESTED AS PER MANUFACTURERS SPECIFICATIONS.
- ASSEMBLY JOINTS WITH SPIGOT END WITHDRAWN 5 TO 10 FROM BACK OF SOCKET TO ACCOMMODATE EXPANSION AND CONTRACTION RESULTING FROM TEMPERATURE FLUCTUATIONS.
- PROVIDE STEEL GRILLES WHERE THE VERTICAL DISTANCE 'H' EXCEEDS 1800 GRILLE TO BE CLAMPED ON TIGHTLY TO PREVENT MOVEMENT. SEE WAT-1311.

CONCRETE

- ALL WORKMANSHIP AND MATERIALS MUST BE IN ACCORDANCE WITH THE CURRENT EDITION OF AS3600 INCLUDING AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- READYMIX CONCRETE SUPPLY MUST COMPLY WITH AS1379.
- CONCRETE QUALITY:
GENERAL REQUIREMENTS ARE GIVEN IN THE FOLLOWING TABLE. REFER TO THE SPECIFICATION FOR ADDITIONAL REQUIREMENTS FOR SPECIAL CLASS CONCRETE.

ELEMENT	EXPOSURE TO AS3600	STRENGTH GRADE (MPa)	MIN. COVER (mm)	ADJUST COVER FOR FIRE RATING
P1	A2	25	65	-

- SL - SHRINKAGE LIMITED
- PROJECT CONTROL TESTING MUST BE CARRIED OUT ON ALL SPECIAL CLASS CONCRETE IN ACCORDANCE WITH AS1379, CLAUSE 6.5.
 - ADMIXTURES CONTAINING CHLORIDES MUST NOT BE USED.
 - CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY AND FIRE RESISTANCE MUST BE AS FOLLOWS U.N.O.

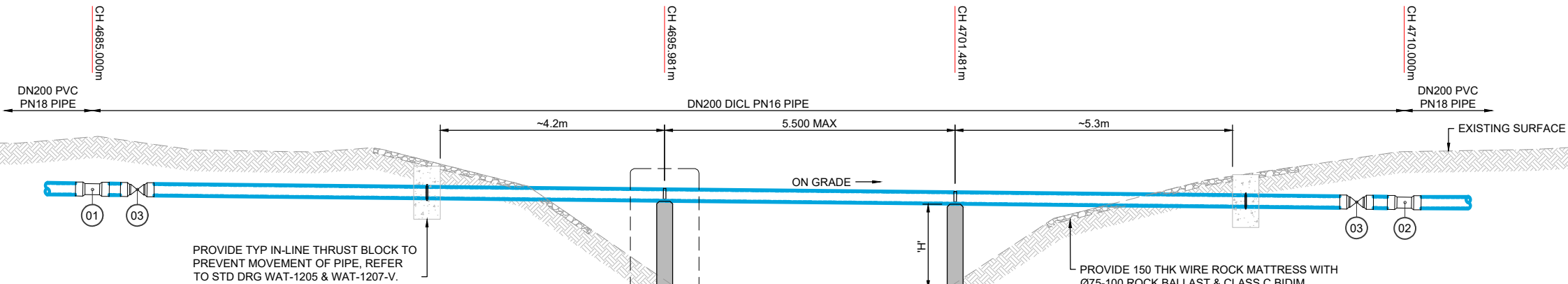
ID	CONC CLASS	STRENGTH GRADE (MPa)	MAX AGG SIZE (mm)	SLUMP (mm)	MAX SHRINKAGE STRAIN@56 DAYS (U-10*6)
P1	NORMAL	25	20	80	AS1379

- AT EXTERNALLY EXPOSED SURFACES METALLIC ITEMS INCLUDING FORM BOLTS, FORM SPACERS, METALLIC BAR CHAIRS AND TIEWIRE MUST NOT BE PLACED IN THE COVER ZONE.
- 20 CAMFER MIN. TYP.. MAINTAIN COVER TO REINFORCEMENT AT THESE DETAILS.
 - HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS MUST NOT BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE SUPERINTENDENT.
 - REINFORCEMENT MUST BE SUPPORTED ON PURPOSE MADE CONCRETE, STEEL OR PLASTIC SUPPORTS DEPENDING ON THE EXPOSURE CONDITION TO PROVIDE THE SPECIFIED CLEAR COVER. AT EXTERNAL SURFACES EITHER ALL PLASTIC OR CONCRETE SUPPORTS MUST BE USED.
 - SUPPORTS MUST BE LOCATED AT NOT MORE THAN 60 BAR DIAMETERS EACH WAY FOR BARS.
 - BARS DENOTED N MUST BE TYPE D500N. BARS DENOTED R MUST BE TYPE R250N.
 - PULL OUT BARS OR OTHER BARS WHICH ARE SHOWN ON THE DRAWINGS TO BE RE-BENT ON SITE, MUST BE MADE FROM QUENCHED AND SELF TEMPERED STEEL. THE BARS MUST BE POSITIONED WITH THE INITIAL BEND CLEAR OF THE CONCRETE FACE.
 - SITE BENDING OF REINFORCEMENT BARS MUST BE DONE USING A RE-BENDING TOOL WITHOUT HEATING. THE BARS MUST BE RE-BENT AGAINST A FLAT SURFACE OR A PIN WITH A DIAMETER NOT LESS THAN THE MINIMUM PIN SIZE PRESCRIBED IN AS3600.
 - REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
 - WELDING OF REINFORCEMENT IS NOT PERMITTED U.N.O. ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE SUPERINTENDENT.
 - GIVE A MINIMUM OF 24 HOURS NOTICE FOR INSPECTION OF REINFORCEMENT BY THE SUPERINTENDENT OR AS REQUIRED BY THE SPECIFICATION.
 - THE FINISHED CONCRETE MUST BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE MUST BE COMPACTED WITH MECHANICAL VIBRATORS.
 - CURING OF ALL CONCRETE MUST BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 7 DAYS, U.N.O. APPROVED SPRAY-ON CURING COMPOUNDS THAT COMPLY WITH AS3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED. POLYTHENE SHEETING OR WET HESSIAN MAY BE USED TO RETAIN CONCRETE MOISTURE WHERE PROTECTED FROM WIND AND TRAFFIC. CURING MUST COMMENCE IMMEDIATELY AFTER CONCRETE PLACEMENT.
 - CONSTRUCTION SUPPORT PROPPING MUST BE LEFT IN PLACE WHERE NEEDED TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING. BACKPROPPING IS SUBJECT TO APPROVAL BY THE SUPERINTENDENT. NO BRICKWORK OR PARTITION WALLS MUST BE CONSTRUCTED ON SUSPENDED LEVELS UNTIL SLAB HAS CURED AND ALL PROPPING IS REMOVED AND THE SLAB HAS DEFLECTED UNDER ITS SELF WEIGHT.

STRUCTURAL STEEL

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH 4100.
- ALL STRUCTURAL STEELWORK SHALL BE:
 - HOT DIP GALVANISED IN ACCORDANCE WITH AS2309, AS2312 AND AS4680; AND
 - ALL DAMAGED GALVANISING SHALL BE REPAIRED IN ACCORDANCE WITH CLAUSE 8 OF AS4680 OR WITH A TWO-PACK PAINT FINISH: FIRST COAT: DULUX ZINCANODE 402 OR AN APPROVED EQUIVALENT. SECOND COAT: DULUX DUREMAX GPE MID OR AN APPROVED EQUIVALENT.

- THE GRADE OF STRUCTURAL STEEL SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
 - PLATE 300 MPa MIN.
 - CHANNEL SECTION 350 MPa MIN.
 - RECTANGULAR HOLLOW SECTION 350 MPa MIN.
- U.N.O. ALL BOLTS SHALL BE HOT-DIP GALVANISED AND SHALL BE GRADE 8.8/S HIGH STRENGTH BOLTS IN ACCORDANCE WITH AS1252.
- WELDING SHALL BE DONE BY A QUALIFIED WELDER IN ACCORDANCE WITH AS1554.
- PIPE SUPPORT TO BE SHIFTED VERTICALLY TO ACCOMMODATE CHANGE IN LEVEL OF WATER MAIN.
- BOLTS SHALL BE ASSEMBLED AND TENSIONED IN ACCORDANCE WITH TMR TECHNICAL NOTE TN62.

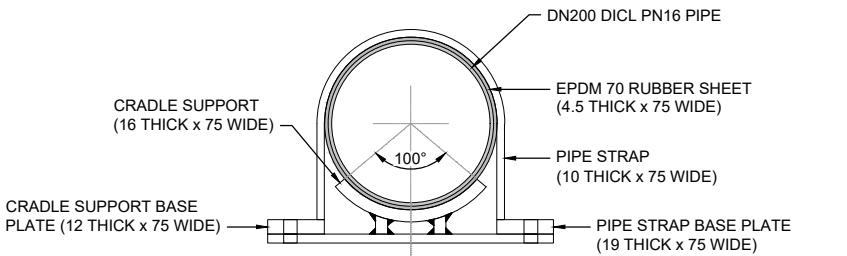


SCHEDULE OF QUANTITIES

NUMBER	MATERIAL/DESCRIPTION	QTY
01	DN200 SO-SO 22.5° BEND	1
02	DN200 SO-SO 11.25° BEND	1
03	DN200 AVK GATE VALVE 01/71 W/ 2/ AVK SUPPORT BUSHES & ANCHOR BLOCK (OMITTED FOR CLARITY)	2

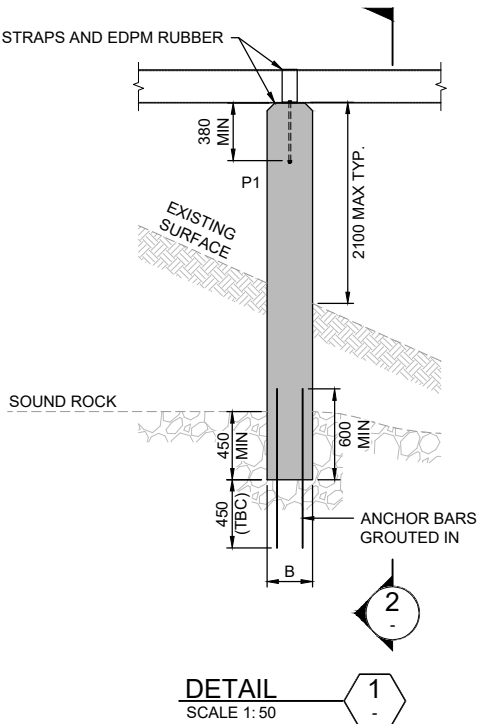
TYPE Z PIPE SUPPORT

(PIPE AQUEDUCT)
N.T.S

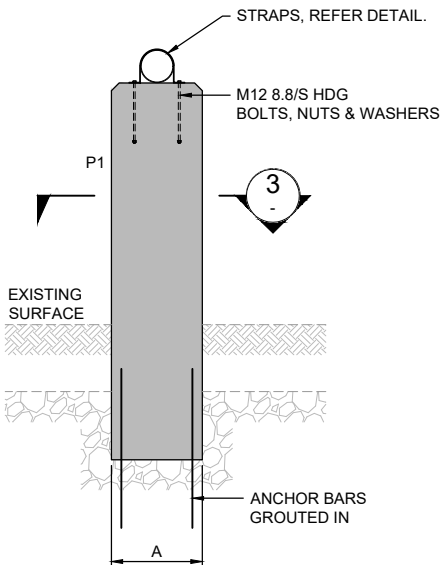


STRAP AND CRADLE SECTION

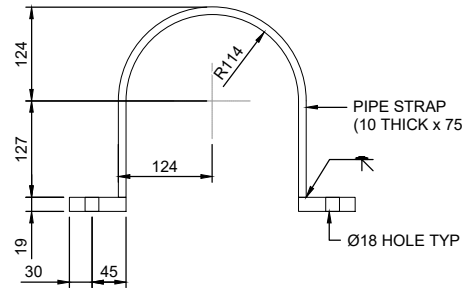
SCALE 1:10



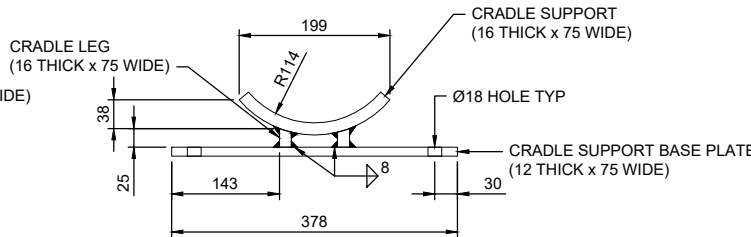
DETAIL
SCALE 1: 50



SECTION
SCALE 1: 50



PIPE STRAP DETAIL - ELEVATION
SCALE 1:10



CRADLE SUPPORT DETAIL - ELEVATION
SCALE 1:10

STRUCTURAL FOOTING SCHEDULE

ID	A	B	REINFORCEMENT
P1	600	300	10/N16 LONGITUDINAL BARS, 180 COG TOP & BTM, R10 TIES @200 MIN

IMPORTANT

IN ACCORDANCE WITH PIPA INDUSTRY GUIDELINES FOR PVC, PP & PE PIPELINE INSTALLATION ON CURVED ALIGNMENT, THE MINIMUM BEND RADIUS OF "15 x DN" SHALL BE ADOPTED.

GENERAL

- FOR NOTES, & LEGEND DETAILS, REFER TO DRG 101-GE
- FOR PE WATER MAIN DETAILS, REFER TO WSA STD DRG WAT-1105
- FOR HORIZONTAL BEND THRUST BLOCK DETAILS REFER TO WSA STD DRG WAT-1205
- FOR IN-LINE THRUST BLOCK DETAILS, REFER TO WSA STD DRG WAT-1206
- FOR VERTICAL BEND THRUST BLOCK DETAILS, REFER TO WSA STD DRG WAT-1207

FIRST ISSUE	CALCS DRAWN	DATE	AMENDMENT DETAILS
LM	DA	11/19	
LM	JO	04/09/20	DETAILED DESIGN ISSUE

DESIGN CHECK	COPYRIGHT © MOLONEY SOLUTIONS PTY LTD 2019 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.
DRAWN CHECK	

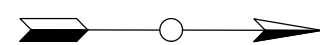
DATUM	PROJECT No.
	CE18119.1

ISSUED FOR APPROVAL
APPROVED
FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING

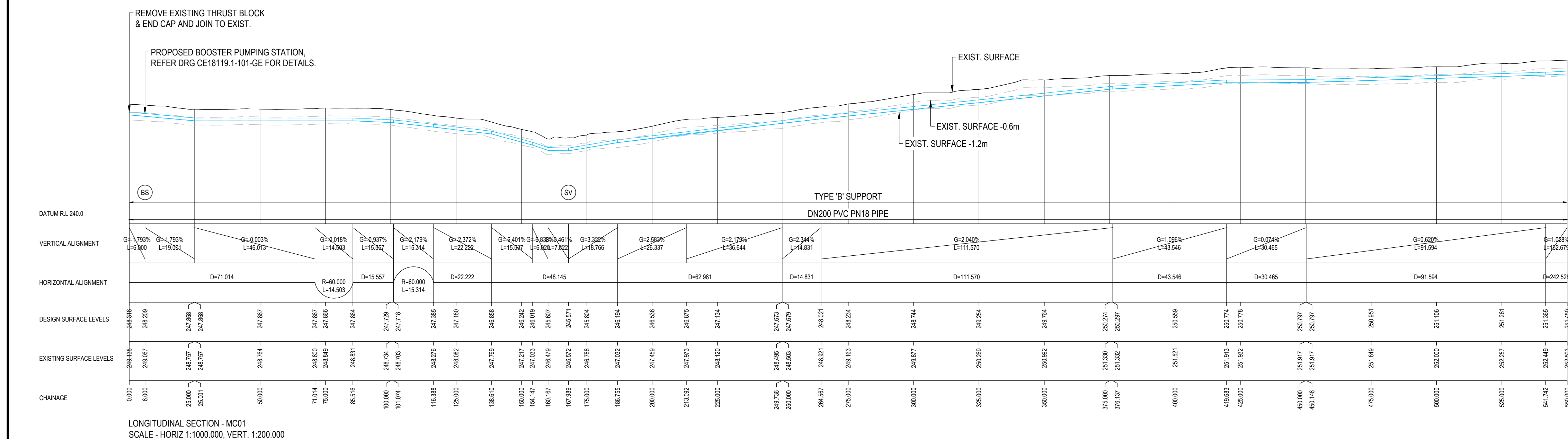
CLIENT	COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL
PROJECT	GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1

MOLONEY & SONS
ENGINEERING
EXCELLENCE - INTEGRITY - INNOVATION
P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701
www.moloneyandsons.com.au
ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE
GOLD COAST • COFFS HARBOUR • SYDNEY

DRAWING TITLE	GENERAL DETAILS SHEET 3 OF 3
DRAWING NUMBER	CE18119.1-103-GE
ISSUE	A



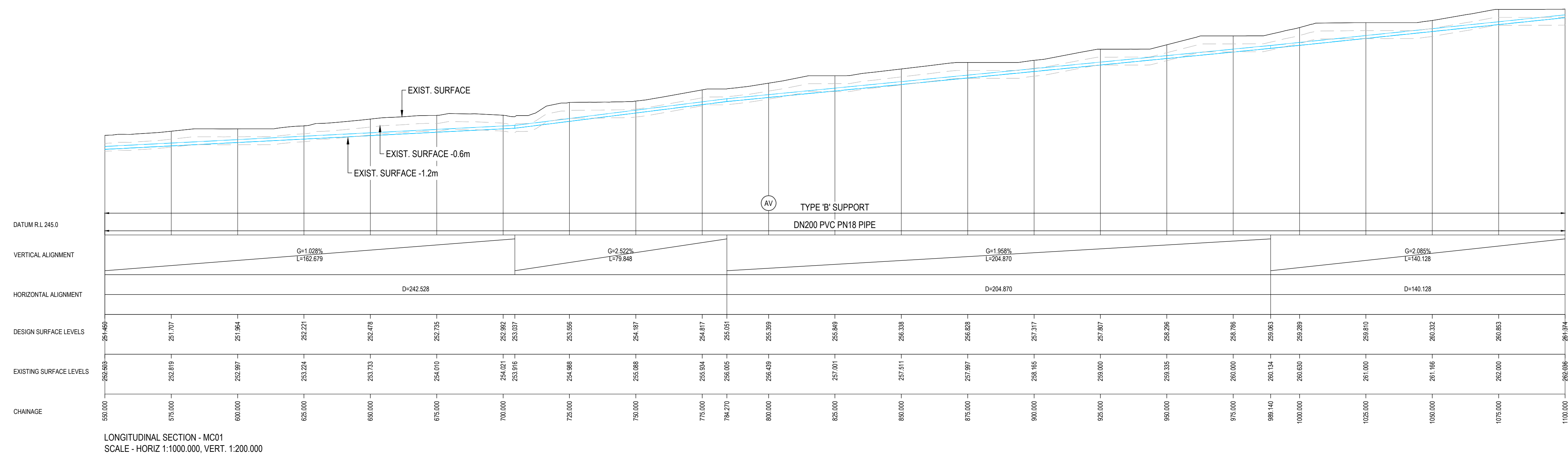
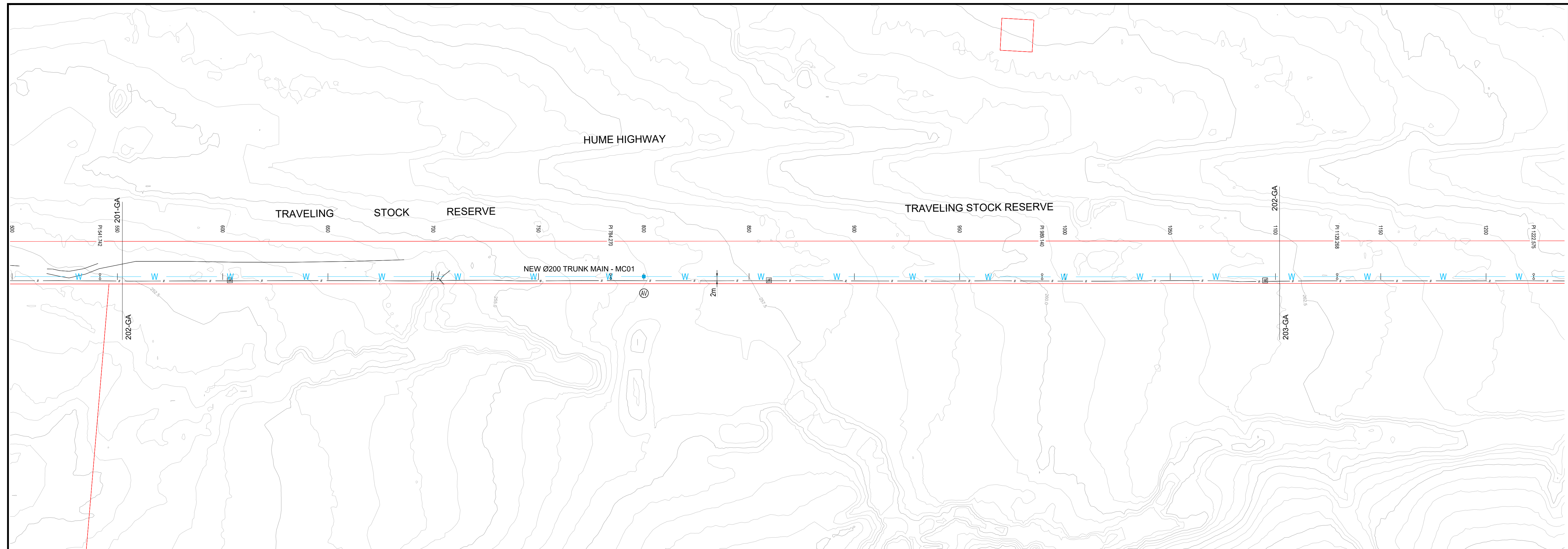
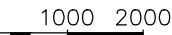
0 1000 2000



GENERAL:


1. FOR NOTES, LEGEND REFER DRG CE18119.1-002-GA
2. FOR TYPE 'B' TRENCH SUPPORT REFER STD DRG WAT-1250-S
3. ALL VERTICAL & VERTICAL DEFLECTIONS TO BE IN ACCORDANCE WITH PIPA INDUSTRY GUIDELINES FOR PVC, PP & PE PIPELINE INSTALLATION ON CURVED ALIGNMENT, THE MINIMUM BEND RADIUS OF "15 X DN" SHALL BE ADOPTED
4. MAINTAIN ALL WATER SERVICES DURING CONSTRUCTION, MAKE PROVISION OF TEMP. CONNECTION WHERE/IF REQUIRED.
5. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SYDNEY WATER/WSAA DESIGN & CONSTRUCTION GUIDELINES AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION BEFORE PROCEEDING WITH WORKS.
6. DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
7. SET-OUT DIMENSIONS & LEVELS, INCLUDING ANY SHOWN ON THE DRAWINGS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE FABRICATION & CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PIPES AND PITS AGAINST FLOATION DURING CONSTRUCTION.
9. NO SUBSTITUTE MATERIALS SHALL BE USED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

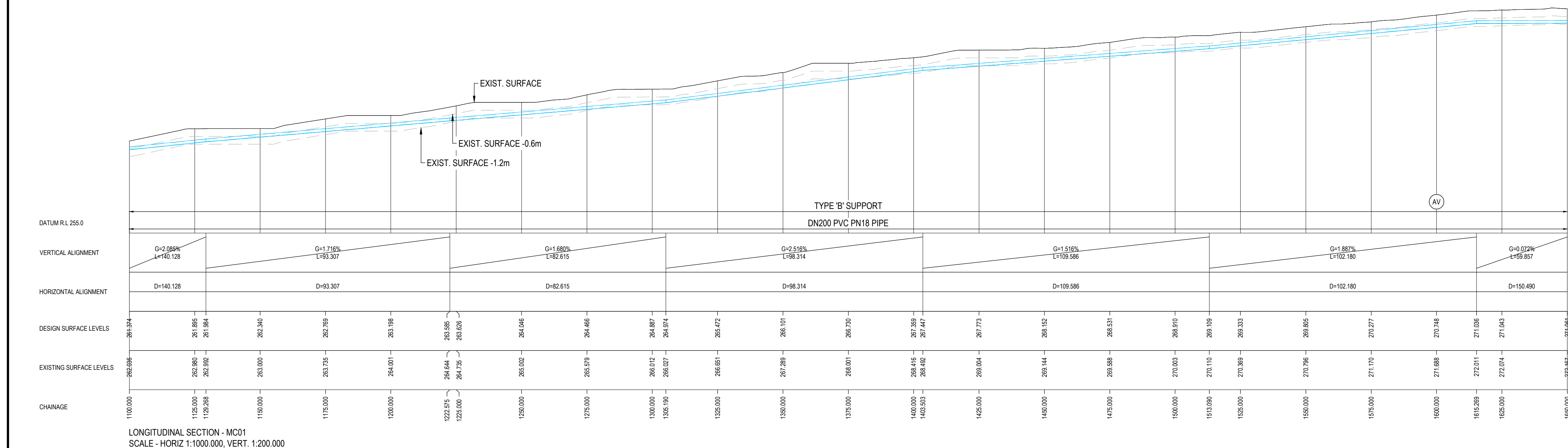
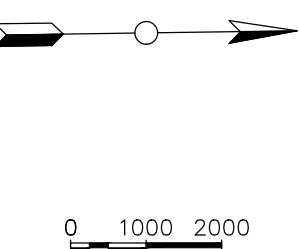
[illegible]



GENERAL:

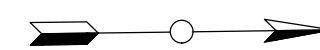
1. FOR NOTES, LEGEND REFER DRG CE181119, 1-002-GA
2. FOR TYPE 'B' TRENCH SUPPORT REFER STD DRG WA-1250-S
3. ALL HORIZONTAL & VERTICAL DEFLECTIONS TO BE IN ACCORDANCE WITH PIPA INDUSTRY GUIDELINES FOR PVC, PP & PE PIPELINE INSTALLATION ON CURVED ALIGNMENT, THE MINIMUM BEND RADIUS OF '15" DN" SHALL BE ADOPTED.
4. MAINTAIN ALL WATER SERVICES DURING CONSTRUCTION, MAKE PROVISION OF TEMP. CONNECTION WHERE/IF REQUIRED.
5. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SYDNEY WATER/WSAA DESIGN & CONSTRUCTION GUIDELINES AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION BEFORE PROCEEDING WITH WORKS.
6. DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
7. SET OUT DIMENSIONS & LEVELS, INCLUDING ANY SHOWN ON THE DRAWINGS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE FABRICATION & CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PIPES AND PITS AGAINST FLOATION DURING CONSTRUCTION.
9. NO SUBSTITUTE MATERIALS SHALL BE USED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

FIRST ISSUE	CALCS LM	DRAWN DA	DATE 11/19	AMENDMENT DETAILS		DESIGN CHECK	COPYRIGHT © MOLONEY SOLUTIONS PTY LTD 2019	DATUM	CLIENT COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL		
A	LM	JO	29/11/19	CONCEPT DESIGN ISSUE			<div>AS/NZS ISO 9001</div> <p>These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.</p>		<div>ISSUED FOR APPROVAL</div>	<div>PROJECT</div> <div>GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1</div>	
B	LM	JO	25/05/20	PRELIMINARY DESIGN ISSUE							
C	LM	JO	04/09/20	DETAILED DESIGN ISSUE							
6-1/2 INCHES						DRAWN CHECK		PROJECT No.	APPROVED	PROJECT	
								CE18119.1		<div><div>MOLONEY & SONS ENGINEERING EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON - GLADSTONE - ROMA - MILES - CHINCHILLA - BRISBANE GOLD COAST - COFFS HARBOUR - SYDNEY</div></div>	
								FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING		<div>DRAWING TITLE</div> <div>GENERAL ARRANGEMENT SHEET 2 OF 10</div> <div>DRAWING NUMBER</div> <div>CE18119.1-202-GA</div> <div>ISSUE</div> <div>C</div>	

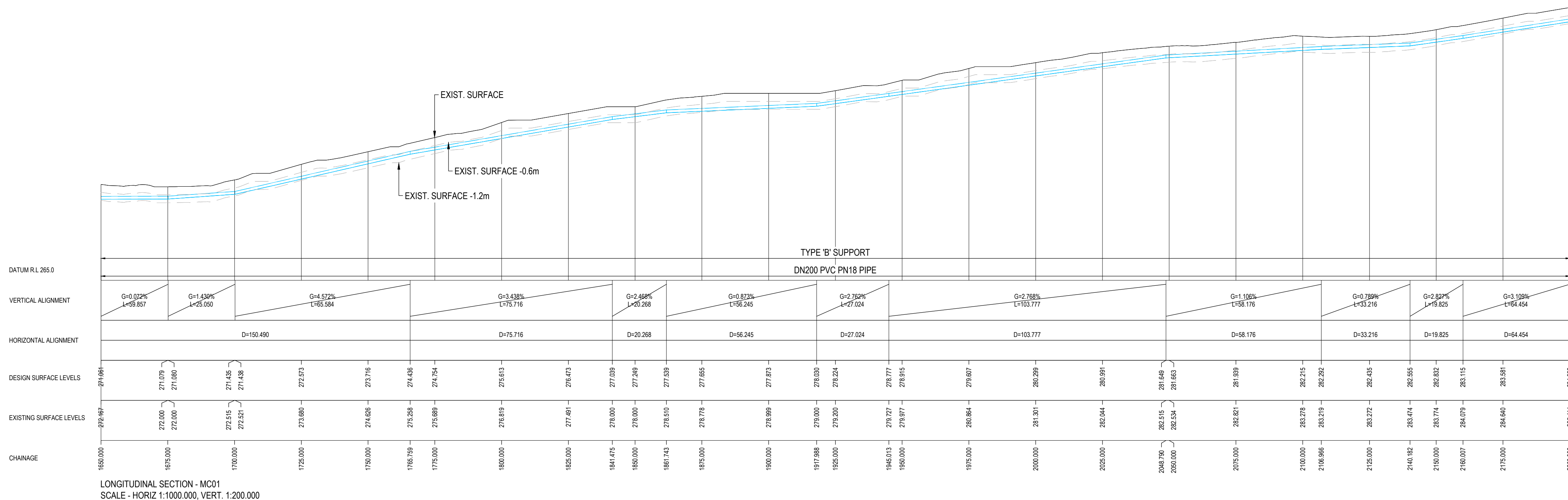
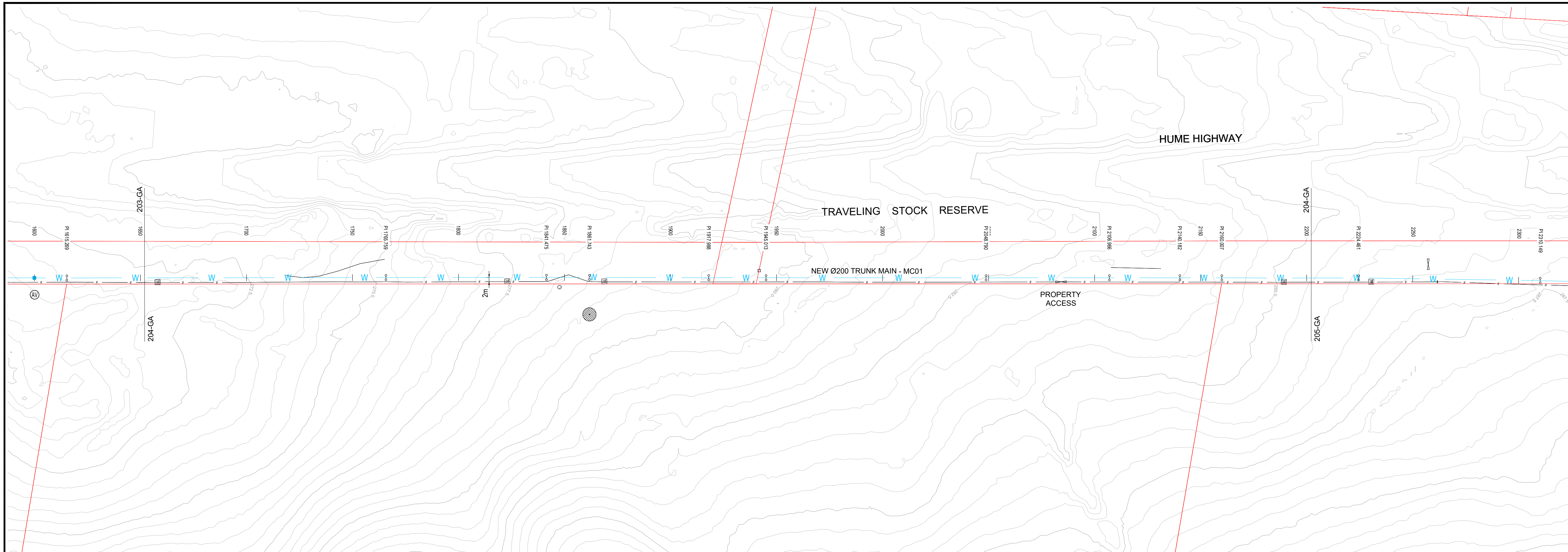


1. FOR NOTES, LEEND REFER DRG CE18119.1-002-GA
2. FOR TYPE 'B' TRENCH SUPPORT REFER STD DRG WAT-1250-S
3. ALL HORIZONTAL & VERTICAL DEFLECTIONS TO BE IN IN ACCORDANCE WITH PIPA INDUSTRY GUIDELINES FOR PVC, PP & PE PIPELINE INSTALLATION ON CURVED ALIGNMENT, THE MINIMUM BEND RADI OF "15 x DN" SHALL BE ADOPTED
4. MAINTAIN ALL WATER SERVICES DURING CONSTRUCTION, MAKE PROVISION OF TEMP. CONNECTION WHERE/IF REQUIRED.
5. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SYDNEY WATER/WSAA DESIGN & CONSTRUCTION GUIDELINES AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION BEFORE PROCEEDING WITH WORKS.
6. DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
7. SET-OUT DIMENSIONS & LEVELS, INCLUDING ANY SHOWN ON THE DRAWINGS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE FABRICATION & CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PIPES AND PITS AGAINST FLOATATION DURING CONSTRUCTION.
9. NO SUBSTITUTE MATERIALS SHALL BE USED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.


	CALCS DRAWN	DATE			DESIGN CHECK	COPYRIGHT © MOLONEY SOLUTIONS PTY LTD 2019 <small>These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figure dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.</small>	DATUM		CUSTOMER COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL		DRAWING TITLE GENERAL ARRANGEMENT SHEET 3 OF 10	
FIRST ISSUE	LM	DA	11/19									
A	LM	JO	29/11/19	CONCEPT DESIGN ISSUE			PROJECT No.	ISSUED FOR APPROVAL	PROJCT	GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1		
B	LM	JO	25/05/20	PRELIMINARY DESIGN ISSUE								
C	LM	JO	04/09/20	DETAILED DESIGN ISSUE	DRAWN CHECK		APPROVED					
REVISIONS							CE18119.1	FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING		MOLONEY & SONS ENGINEERING EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE GOLD COAST • COFFERS HARBOUR • SYDNEY	DRAWING NUMBER CE18119.1-203-GA	ISSUE C

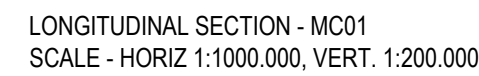




0 1000 2000

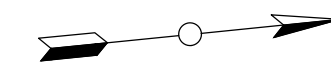


- GENERAL:**
- FOR NOTES, LEGEND REFER DRG CE18119.1-002-GA
 - FOR TYPE 'B' TRENCH SUPPORT REFER STD DRG WAT-1250-S
 - ALL HORIZONTAL & VERTICAL DEFLECTIONS TO BE IN IN ACCORDANCE WITH PIPA INDUSTRY GUIDELINES FOR PVC, PP & PE PIPELINE INSTALLATION ON CURVED ALIGNMENT, THE MINIMUM BEND RADII OF "15 x DN" SHALL BE ADOPTED.
 - MAINTAIN ALL WATER SERVICES DURING CONSTRUCTION, MAKE PROVISION OF TEMP. CONNECTION WHERE/IF REQUIRED.
 - THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SYDNEY WATER/WSAA DESIGN & CONSTRUCTION GUIDELINES AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION BEFORE PROCEEDING WITH WORKS.
 - DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
 - SET-OUT DIMENSIONS & LEVELS, INCLUDING ANY SHOWN ON THE DRAWINGS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE FABRICATION & CONSTRUCTION.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PIPES AND PITS AGAINST FLOATATION DURING CONSTRUCTION.
 - NO SUBSTITUTE MATERIALS SHALL BE USED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

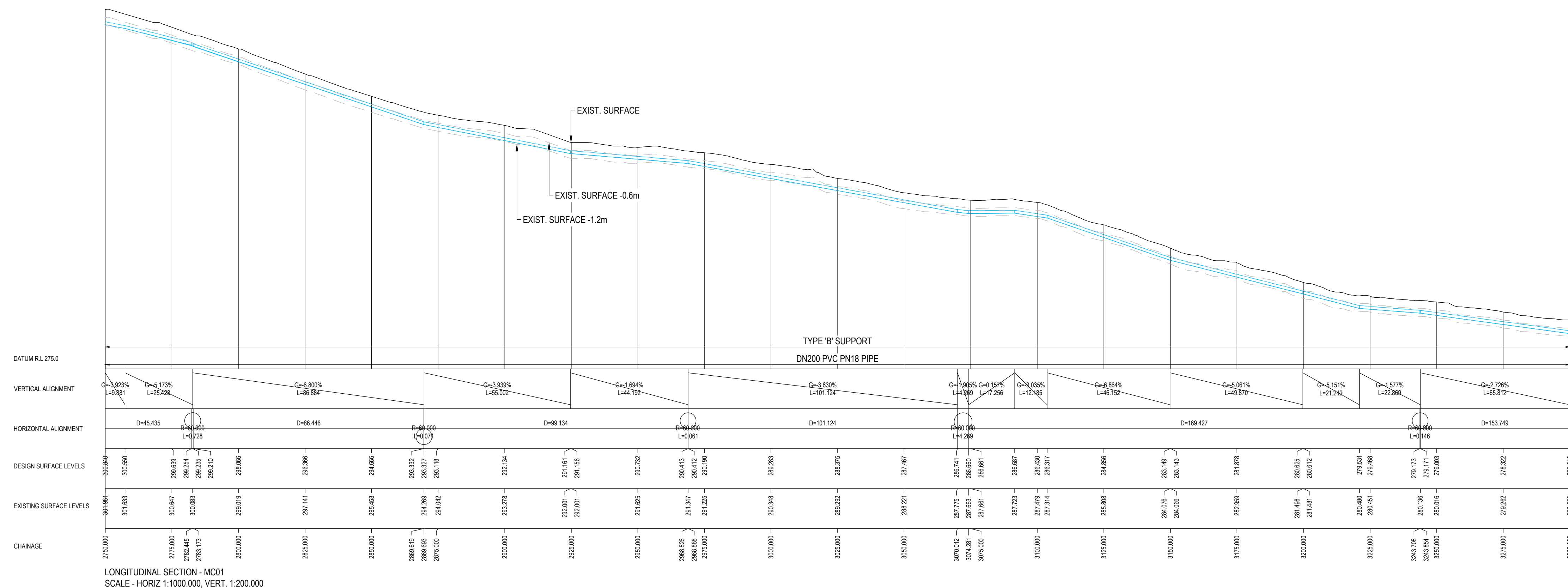
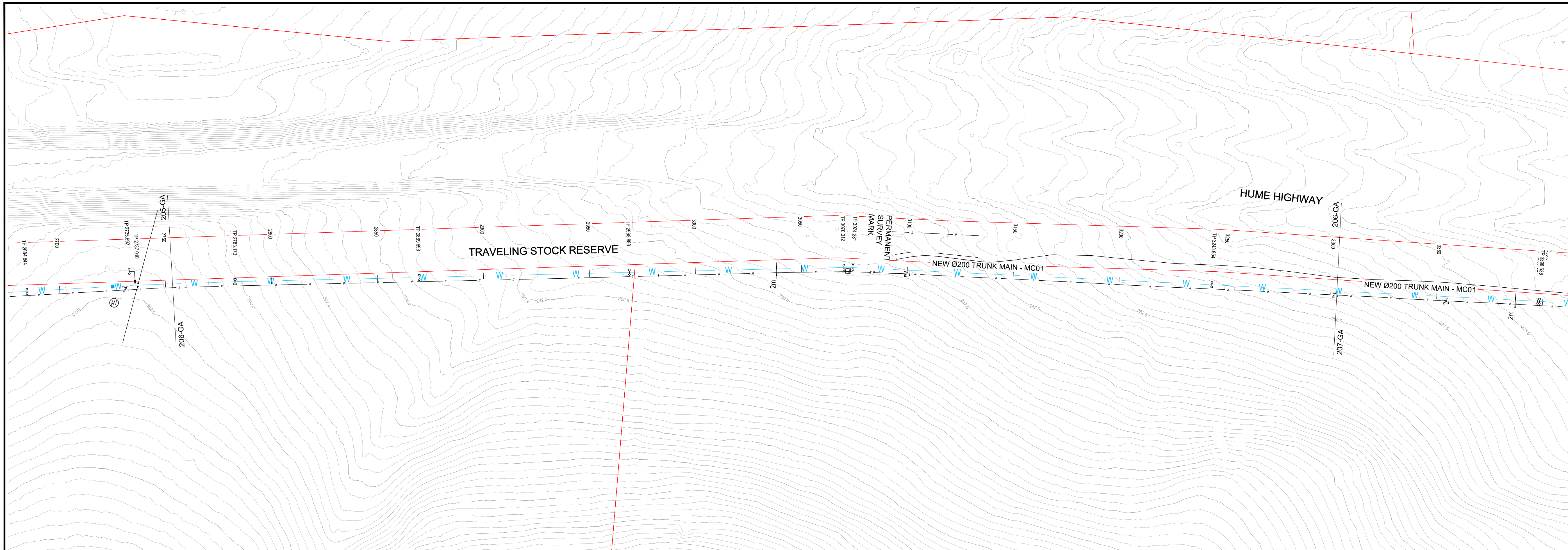
UNCONTROLLED	FIRST ISSUE	CALCS DRAWN		DATE		AMENDMENT DETAILS						DESIGN CHECK		COPYRIGHT		DATING		CLIENT		 <div>MOLONEY & SONS ENGINEERING EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON - GLADSTONE - ROMA - MILES - CHINCHILLA - BRISBANE GOLD COAST - COFFS HARBOUR - SYDNEY</div>		DRAWING TITLE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		LM	DA	11/19										© MOLONEY SOLUTIONS PTY LTD 2019				COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL				GENERAL ARRANGEMENT SHEET 4 OF 10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	A	LM	JO	29/11/19		CONCEPT DESIGN ISSUE								These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.		PROJECT No.		APPROVED				GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1		CE18119.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	B	LM	JO	25/05/20		PRELIMINARY DESIGN ISSUE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	C	LM	JO	04/09/20		DETAILED DESIGN ISSUE						DRAWN CHECK																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													</



FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS	DESIGN CHECK	COPYRIGHT © MOLONEY SOLUTIONS PTY LTD 2019 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verily dimensions prior to commencing any works.		DATUM	<div>ISSUED FOR APPROVAL</div>	CLIENT COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL	 MOLONEY & SONS ENGINEERING EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON - GOLDSTONE - ROMA - MILES - CHINCHILLA - BRISBANE GLAD COAST - COFFS HARBOR - SYDNEY	DRAWING TITLE GENERAL ARRANGEMENT SHEET 5 OF 10	DRAWING NUMBER CE18119.1-205-GA	ISSUE C		
	LM	DA	11/19													
	A	LM	JO												29/11/19	CONCEPT DESIGN ISSUE
	B	LM	JO												25/05/20	PRELIMINARY DESIGN ISSUE
	C	LM	JO												04/09/20	DETAILED DESIGN ISSUE
AMENDMENTS					DRAWN CHECK			PROJECT No.	APPROVED							
								CE18119.1								
								FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING								

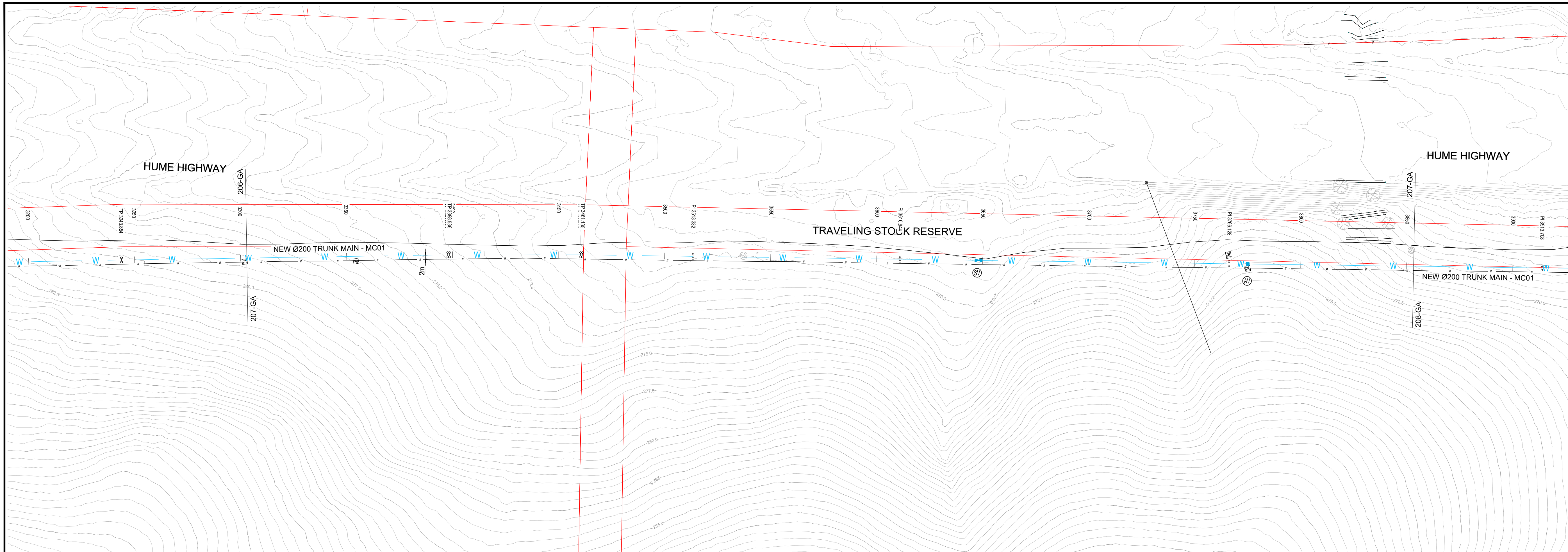
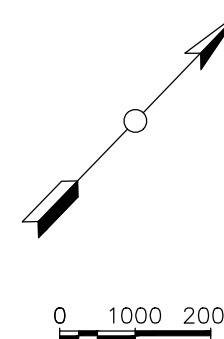


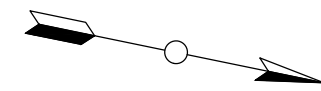
0 1000 2000



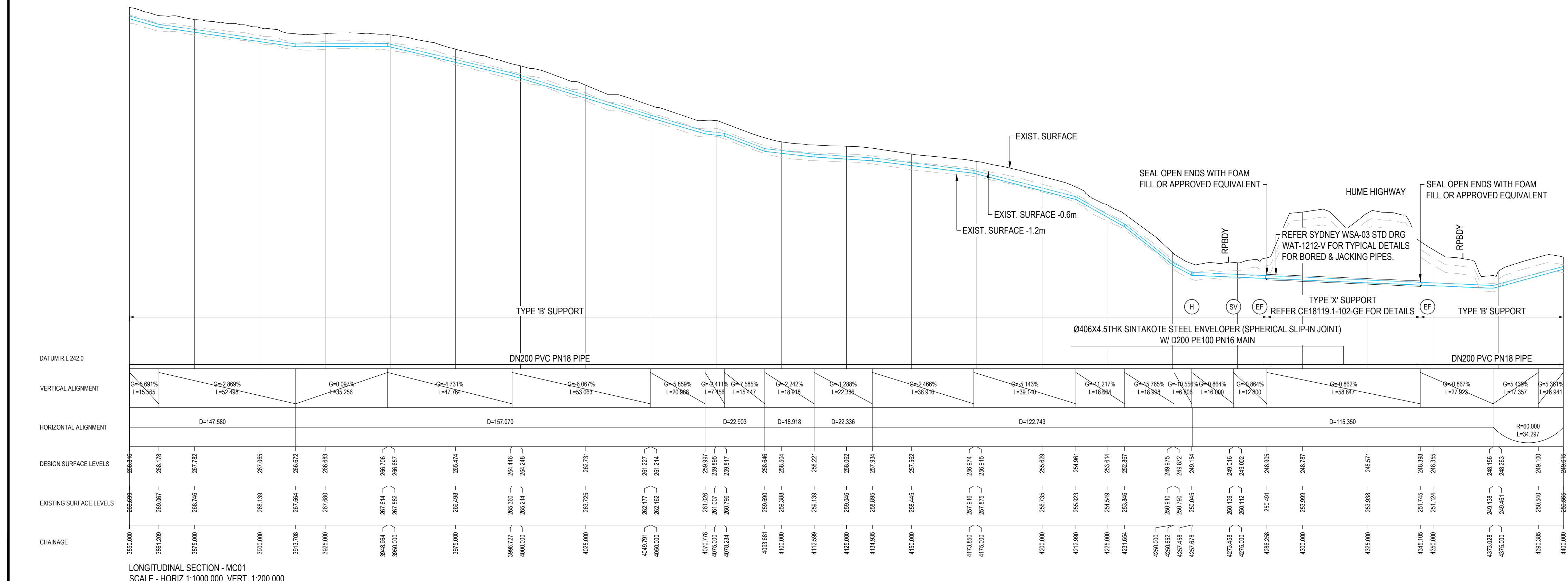
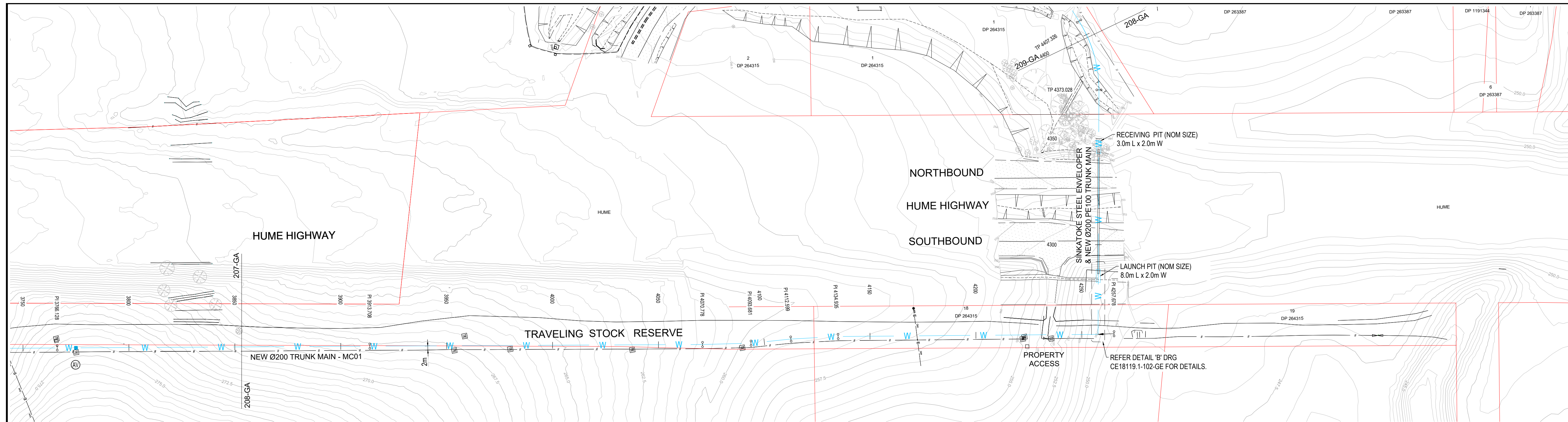
- GENERAL:**
- FOR NOTES, LEGEND REFER DRG CE18119.1-002-GA
 - FOR TYPE 'B' TRENCH SUPPORT REFER STD DRG WAT-1250-S
 - ALL HORIZONTAL & VERTICAL DEFLECTIONS TO BE IN IN ACCORDANCE WITH PIPA INDUSTRY GUIDELINES FOR PVC, PP & PE PIPELINE INSTALLATION ON CURVED ALIGNMENT, THE MINIMUM BEND RADII OF "15 x DN" SHALL BE ADOPTED.
 - MAINTAIN ALL WATER SERVICES DURING CONSTRUCTION, MAKE PROVISION OF TEMP. CONNECTION WHERE/IF REQUIRED.
 - THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SYDNEY WATER/WSAA DESIGN & CONSTRUCTION GUIDELINES AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION BEFORE PROCEEDING WITH WORKS.
 - DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
 - SET-OUT DIMENSIONS & LEVELS, INCLUDING ANY SHOWN ON THE DRAWINGS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE FABRICATION & CONSTRUCTION.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PIPES AND PITS AGAINST FLOATATION DURING CONSTRUCTION.
 - NO SUBSTITUTE MATERIALS SHALL BE USED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

FIRST ISSUE			CALCS DRAWN			DATE			AMENDMENT DETAILS			DESIGN CHECK			DRAWN CHECK			COPYRIGHT			DATUM			CLIENT			PROJECT			DRAWING TITLE			DRAWING NUMBER			ISSUE		
A			LM			DA												© MOLONEY SOLUTIONS PTY LTD 2019			PROJECT No.			COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL			GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1			GENERAL ARRANGEMENT SHEET 6 OF 10			CE18119.1-206-GA			C		
B			LM			JO			29/11/19									These designs and drawings are copyright and are not to be used or reproduced without the written permission of this above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.			CE18119.1			GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1			EXCELLENCE - INTEGRITY - INNOVATION			SHEET 6 OF 10			CE18119.1-206-GA			C		
C			LM			JO			25/05/20												PROJECT No.			COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL			GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1			GENERAL ARRANGEMENT SHEET 6 OF 10			CE18119.1-206-GA			C		
D			LM			JO			04/09/20												PROJECT No.			COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL			GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1			GENERAL ARRANGEMENT SHEET 6 OF 10			CE18119.1-206-GA			C		






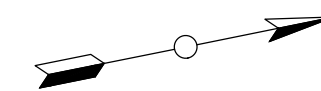
0 1000 2000



GENERAL:

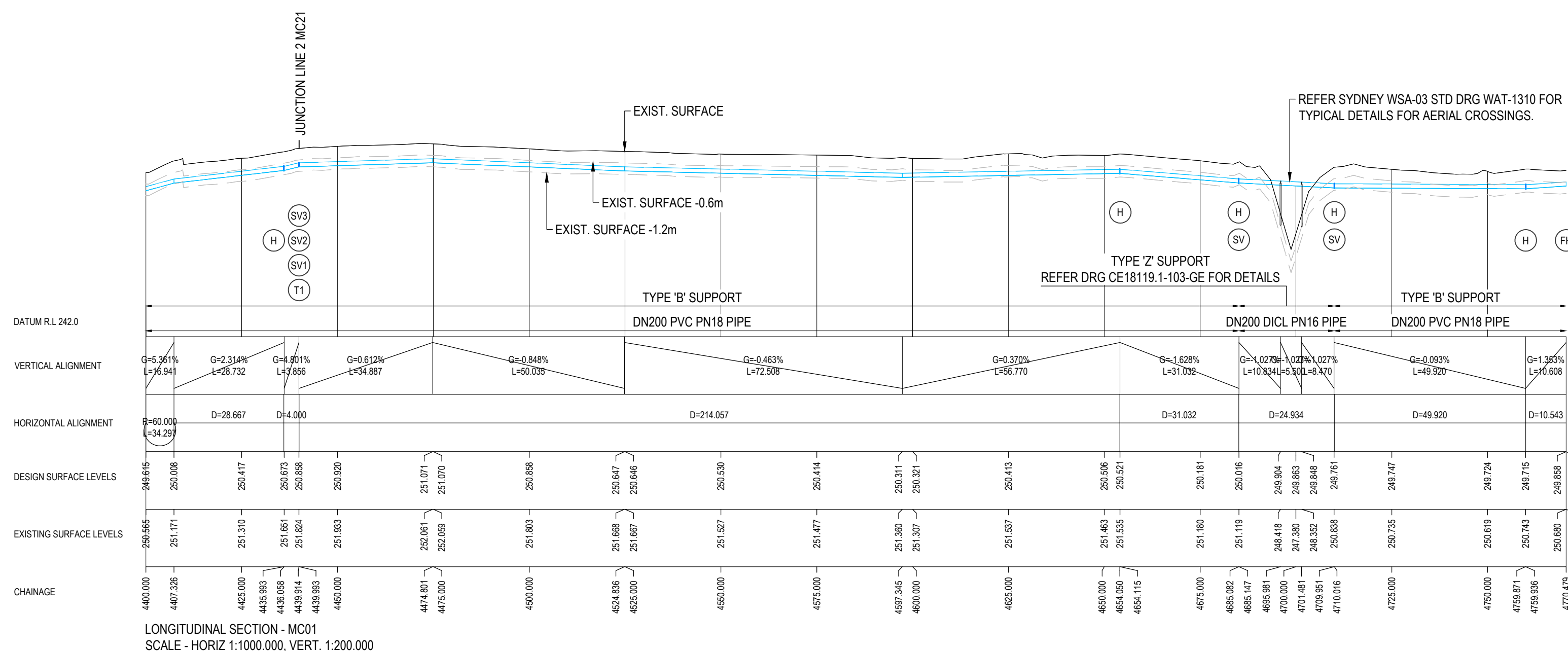
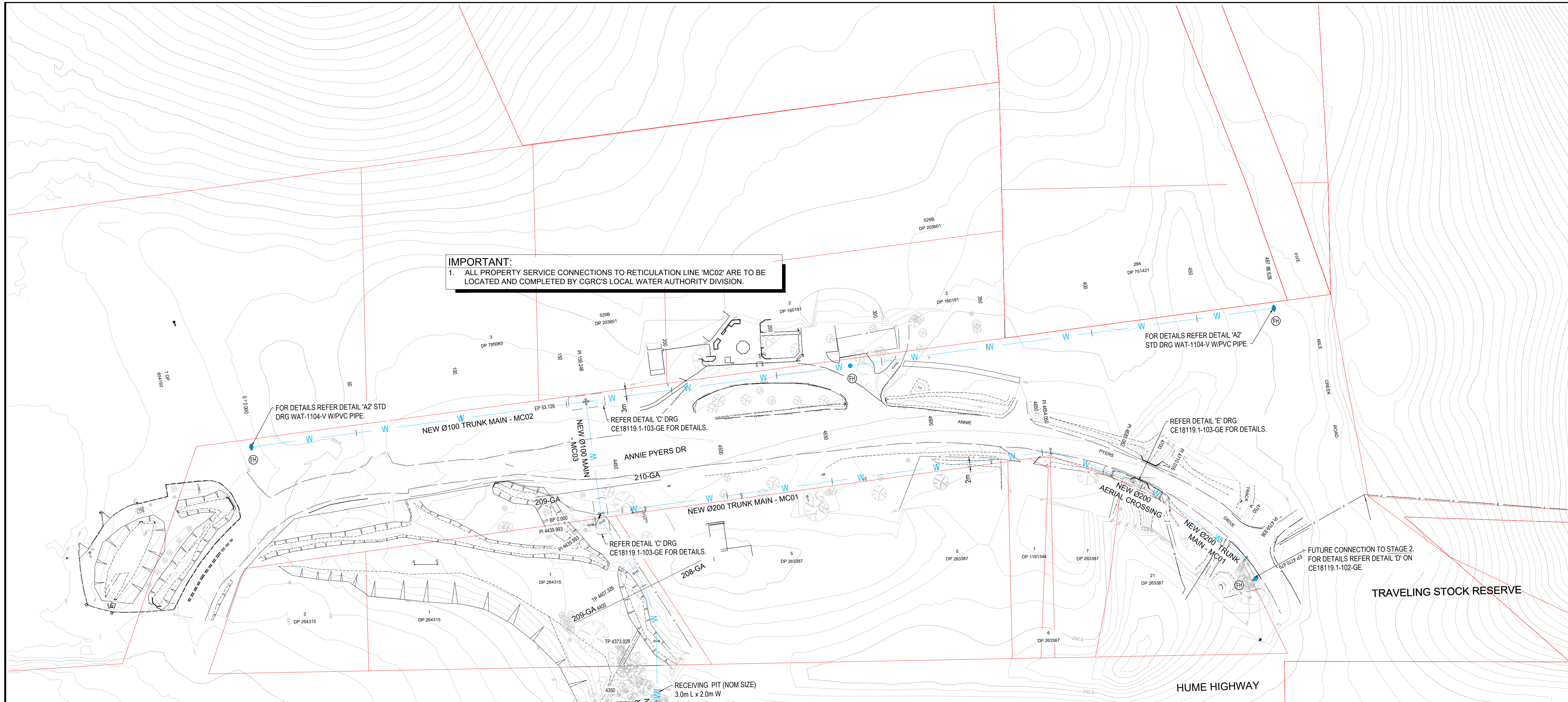
- FOR NOTES, LEGEND REFER DRG CE18119.1-002-GA
- FOR TYPE 'B' TRENCH SUPPORT REFER STD DRG WAT-1250-S
- ALL HORIZONTAL & VERTICAL DEFLECTIONS TO BE IN ACCORDANCE WITH PIPA INDUSTRY GUIDELINES FOR PVC, PP & PE PIPELINE INSTALLATION ON CURVED ALIGNMENT, THE MINIMUM BEND RADI OF "15 x DN" SHALL BE ADOPTED.
- MAINTAIN ALL WATER SERVICES DURING CONSTRUCTION, MAKE PROVISION OF TEMP. CONNECTION WHERE/IF REQUIRED.
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SYDNEY WATER/WSAA DESIGN & CONSTRUCTION GUIDELINES AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION BEFORE PROCEEDING WITH WORKS.
- DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
- SET-OUT DIMENSIONS & LEVELS, INCLUDING ANY SHOWN ON THE DRAWINGS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE FABRICATION & CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PIPES AND PITS AGAINST FLOATATION DURING CONSTRUCTION.
- NO SUBSTITUTE MATERIALS SHALL BE USED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

FIRST ISSUE			CALCS DRAWN			DATE			AMENDMENT DETAILS			DESIGN CHECK			COPYRIGHT			DATUM			CLIENT			<div><div>MOLONEY & SONS ENGINEERING EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE GOLD COAST • COFFS HARBOUR • SYDNEY</div></div>			DRAWING TITLE		
LM			DA			11/19			CONCEPT DESIGN ISSUE			© MOLONEY SOLUTIONS PTY LTD 2019 <small>These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.</small>			<div><div>ISSUED FOR APPROVAL</div><div>PROJECT No.</div><div>CE18119.1</div><div>FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING</div></div>			COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL			GENERAL ARRANGEMENT SHEET 8 OF 10								
AMENDMENTS			LM			JO			29/11/19			DRAWN CHECK			PROJECT No.			APPROVED			PROJECT			DRAWING NUMBER			ISSUE		
A			LM			JO			29/11/19												GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1			CE18119.1-208-GA			C		
B			LM			JO			25/05/20			PRELIMINARY DESIGN ISSUE																	
C			LM			JO			04/09/20			DETAILED DESIGN ISSUE																	



0 1000 2000

IMPORTANT:
1. ALL PROPERTY SERVICE CONNECTIONS TO RETICULATION LINE 'MC02' ARE TO BE LOCATED AND COMPLETED BY CGRC'S LOCAL WATER AUTHORITY DIVISION.



- GENERAL:**
- FOR NOTES, LEGEND REFER DRG CE18119.1-002-GA
 - FOR TYPE 'B' TRENCH SUPPORT REFER STD DRG WAT-1250-S
 - ALL HORIZONTAL & VERTICAL DEFLECTIONS TO BE IN ACCORDANCE WITH PIPA INDUSTRY GUIDELINES FOR PVC, PP & PE PIPELINE INSTALLATION ON CURVED ALIGNMENT, THE MINIMUM BEND RADII OF "15 x DN" SHALL BE ADOPTED.
 - MAINTAIN ALL WATER SERVICES DURING CONSTRUCTION, MAKE PROVISION OF TEMP. CONNECTION WHERE/IF REQUIRED.
 - THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SYDNEY WATER/WSAA DESIGN & CONSTRUCTION GUIDELINES AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION BEFORE PROCEEDING WITH WORKS.
 - DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
 - SET-OUT DIMENSIONS & LEVELS, INCLUDING ANY SHOWN ON THE DRAWINGS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE FABRICATION & CONSTRUCTION.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PIPES AND PITS AGAINST FLOATATION DURING CONSTRUCTION.
 - NO SUBSTITUTE MATERIALS SHALL BE USED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

FIRST ISSUE	CALCS DRAWN	DATE	AMENDMENT DETAILS
A	LM	DA	11/19
B	LM	JO	29/11/19
C	LM	JO	25/05/20
D	LM	JO	04/09/20

DESIGN CHECK	COPYRIGHT
	© MOLONEY SOLUTIONS PTY LTD 2019 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document. Issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.
DRAWN CHECK	

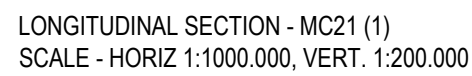
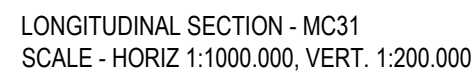
DATUM
PROJECT No.
CE18119.1

ISSUED FOR APPROVAL
APPROVED
FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING

CLIENT
COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL
PROJECT
GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1




MOLONEY & SONS ENGINEERING
EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE GOLD COAST • COFFS HARBOUR • SYDNEY

DRAWING TITLE
GENERAL ARRANGEMENT SHEET 9 OF 10
DRAWING NUMBER
CE18119.1-209-GA
ISSUE
C



GENERAL:

1. FOR NOTES, LEGEND REFER DRG CE18119, 1-002-GA
2. FOR TYPE "B" TRENCH SUPERIOR STRUCTURE WAT-1250-S
3. ALL HORIZONTAL & VERTICAL DEFLECTIONS TO BE IN ACCORDANCE WITH PIPA INDUSTRY GUIDELINES FOR PVC, PP & PE PIPELINE INSTALLATION ON CURVED ALIGNMENT, THE MINIMUM BEND RADIUS OF "15 x DN" SHALL BE ADOPTED.
4. MAINTAIN ALL WATER SERVICES DURING CONSTRUCTION, MAKE PROVISION OF TEMP. CONNECTION WHERE/IF REQUIRED.
5. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SYDNEY WATER/WSAA DESIGN & CONSTRUCTION GUIDELINES AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION BEFORE PROCEEDING WITH WORKS.
6. DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
7. SET-OUT DIMENSIONS & LEVELS, INCLUDING ANY SHOWN ON THE DRAWINGS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE FABRICATION & CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PIPES AND PITS AGAINST FLOATATION DURING CONSTRUCTION.
9. NO SUBSTITUTE MATERIALS SHALL BE USED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

UNITS OF MEASURE	CALCS DRAWN			DATE			AMENDMENT DETAILS			DESIGN CHECK	COPYRIGHT © MOLONEY SOLUTIONS PTY LTD 2019 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked versions are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.	 	DATUM PROJECT No.	<div>ISSUED FOR APPROVAL</div>	CLIENT COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL PROJECT GUNDAGAI - FIVE MILE HUME HIGHWAY NSW PROP. TRUNK WATER MAIN STG 1	 MOLONEY & SONS ENGINEERING EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINGCHILLA • BRISBANE GOLD COAST • COFFS HARBOUR • SYDNEY	DRAWING TITLE GENERAL ARRANGEMENT SHEET 10 OF 10 DRAWING NUMBER CE18119.1-210-GA	ISSUE B	
	LM	DA	11/19	LM	DA	11/19	CONCEPT DESIGN ISSUE												
	A	LM	JO	29/11/19	A	LM	JO	29/11/19	DETAILED DESIGN ISSUE										
	B	LM	JO	04/09/20	B	LM	JO	04/09/20	DETAILED DESIGN ISSUE										
DRAWN CHECK										APPROVED FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING									

Set Out Table for MC01						
	CHAINAGE	EASTING	NORTHING	LENGTH	RADIUS	BEARING
BP EP	0.000 71.014	601316.561 601316.566	6121947.217 6122018.231	71.014		000° 00' 14"
TP IP TP	71.014 78.301 85.516	601316.566 601316.566 601314.823	6122018.231 6122025.518 6122032.593	14.503	60.0	353° 04' 45.75"
BP EP	85.516 101.074	601314.823 601311.100	6122032.593 6122047.698	15.557		346° 09' 18"
TP IP TP	101.074 108.773 116.388	601311.100 601309.257 601309.362	6122047.698 6122055.173 6122062.872	15.314	60.0	353° 28' 01.13"
BP EP	116.388 138.610	601309.362 601309.664	6122062.872 6122085.092	22.222		000° 46' 45"
BP EP	138.610 186.755	601309.664 601311.031	6122085.092 6122133.217	48.145		001° 37' 35"
BP EP	186.755 249.736	601311.031 601311.500	6122133.217 6122196.197	62.981		000° 25' 37"
BP EP	249.736 264.567	601311.500 601311.714	6122196.197 6122211.026	14.831		000° 49' 38"
BP EP	264.567 376.137	601311.714 601313.360	6122211.026 6122322.584	111.570		000° 50' 44"
BP EP	376.137 419.683	601313.360 601313.775	6122322.584 6122366.128	43.546		000° 32' 44"
BP EP	419.683 450.148	601313.775 601314.323	6122366.128 6122396.588	30.465		001° 01' 51"
BP EP	450.148 541.742	601314.323 601315.687	6122396.588 6122488.172	91.594		000° 51' 12"
BP EP	541.742 784.270	601315.687 601318.894	6122488.172 6122730.678	242.528		000° 45' 28"
BP EP	784.270 989.140	601318.894 601321.825	6122730.678 6122935.527	204.870		000° 49' 11"
BP EP	989.140 1129.268	601321.825 601323.638	6122935.527 6123075.644	140.128		000° 44' 28"
BP EP	1129.268 1222.575	601323.638 601324.893	6123075.644 6123168.942	93.307		000° 46' 15"
BP EP	1222.575 1305.190	601324.893 601326.148	6123168.942 6123251.547	82.615		000° 52' 14"
BP EP	1305.190 1403.503	601326.148 601327.481	6123251.547 6123349.852	98.314		000° 46' 37"
BP EP	1403.503 1513.090	601327.481 601328.944	6123349.852 6123459.429	109.586		000° 45' 53"
BP EP	1513.090 1615.269	601328.944 601330.458	6123459.429 6123561.597	102.180		000° 50' 57"

Set Out Table for MC01						
	CHAINAGE	EASTING	NORTHING	LENGTH	RADIUS	BEARING
BP EP	1615.269 1765.759	601330.458 601332.279	6123561.597 6123712.076	150.490		000° 41' 36"
BP EP	1765.759 1841.475	601332.279 601333.211	6123712.076 6123787.786	75.716		000° 42' 19"
BP EP	1841.475 1861.743	601333.211 601333.517	6123787.786 6123808.052	20.268		000° 51' 46"
BP EP	1861.743 1917.988	601333.517 601334.420	6123808.052 6123864.290	56.245		000° 55' 12"
BP EP	1917.988 1945.013	601334.420 601334.774	6123864.290 6123891.312	27.024		000° 45' 09"
BP EP	1945.013 2048.790	601334.774 601336.219	6123891.312 6123995.079	103.777		000° 47' 51"
BP EP	2048.790 2106.966	601336.219 601336.980	6123995.079 6124053.250	58.176		000° 44' 56"
BP EP	2106.966 2140.182	601336.980 601337.463	6124053.250 6124086.463	33.216		000° 50' 02"
BP EP	2140.182 2160.007	601337.463 601337.753	6124086.463 6124106.285	19.825		000° 50' 20"
BP EP	2160.007 2224.461	601337.753 601338.623	6124106.285 6124170.733	64.454		000° 46' 22"
BP EP	2224.461 2310.149	601338.623 601341.056	6124170.733 6124256.387	85.688		001° 37' 38"
BP EP	2310.149 2400.796	601341.056 601344.730	6124256.387 6124346.960	90.647		002° 19' 22"
BP EP	2400.796 2491.897	601344.730 601348.332	6124346.960 6124437.990	91.101		002° 15' 57"
BP EP	2491.897 2541.735	601348.332 601350.268	6124437.990 6124487.790	49.838		002° 13' 37"
BP EP	2541.735 2590.499	601350.268 601352.163	6124487.790 6124536.517	48.764		002° 13' 37"
TP IP TP	2590.499 2590.566 2590.632	601352.163 601352.166 601352.168	6124536.517 6124536.583 6124536.649	0.132	60.0	002° 17' 24.38"
BP EP	2590.632 2684.530	601352.168 601356.024	6124536.649 6124630.469	93.899		002° 21' 12"
TP IP TP	2684.530 2684.587 2684.644	601356.024 601356.026 601356.029	6124630.469 6124630.526 6124630.582	0.114	60.0	002° 24' 27.22"
BP EP	2684.644 2735.692	601356.029 601358.221	6124630.582 6124681.583	51.048		002° 27' 43"
TP IP TP	2735.692 2736.351 2737.010	601358.221 601358.250 601358.293	6124681.583 6124682.242 6124682.899	1.318	60.0	003° 05' 27.66"

Set Out Table for MC01						
	CHAINAGE	EASTING	NORTHING	LENGTH	RADIUS	BEARING
BP EP	2737.010 2782.445	601358.293 601361.241	6124682.899 6124728.239	45.435		003° 43' 13"
TP IP TP	2782.445 2782.809 2783.173	601361.241 601361.264 601361.292	6124728.239 6124728.602 6124728.965	0.728	60.0	004° 04' 04.48"
BP EP	2783.173 2869.619	601361.292 601367.948	6124728.965 6124815.155	86.446		004° 24' 56"
TP IP TP	2869.619 2869.656 2869.693	601367.948 601367.951 601367.953	6124815.155 6124815.191 6124815.228	0.074	60.0	004° 22' 49.84"
BP EP	2869.693 2968.826	601367.953 601375.465	6124815.228 6124914.077	99.134		004° 20' 43"
TP IP TP	2968.826 2968.857 2968.888	601375.465 601375.467 601375.469	6124914.077 6124914.107 6124914.138	0.061	60.0	004° 22' 28.80"
BP EP	2968.888 3070.012	601375.469 601383.234	6124914.138 6125014.964	101.124		004° 24' 14"
TP IP TP	3070.012 3072.148 3074.281	601383.234 601383.398 601383.713	6125014.964 6125017.003 6125019.204	4.269	60.0	006° 26' 31.54"
BP EP	3074.281 3243.708	601383.713 601408.698	6125019.204 6125186.779	169.427		008° 28' 49"
TP IP TP	3243.708 3243.781 3243.854	601408.698 601408.709 601408.720	6125186.779 6125186.852 6125186.924	0.146	60.0	008° 32' 59.92"
BP EP	3243.854 3397.604	601408.720 601431.763	6125186.924 6125338.936	153.749		008° 37' 11"
TP IP TP	3397.604 3398.070 3398.536	601431.763 601431.833 601431.910	6125338.936 6125339.398 6125339.858	0.933	60.0	009° 03' 54.13"
BP EP	3398.536 3460.273	601431.910 601442.111	6125339.858 6125400.746	61.737		009° 30' 37"
TP IP TP	3460.273 3460.704 3461.135	601442.111 601442.182 601442.259	6125400.746 6125401.171 6125401.594	0.861	60.0	009° 55' 17.62"
BP EP	3461.135 3513.332	601442.259 601451.622	6125401.594 6125452.945	52.197		010° 19' 58"
BP EP	3513.332 3610.944	601451.622 601469.119	6125452.945 6125548.976	97.612		010° 19' 35"
BP EP	3610.944 3766.128	601469.119 601496.913	6125548.976 6125701.650	155.184		010° 19' 03"
BP EP	3766.128 3913.708	601496.913 601523.282	6125701.650 6125846.856	147.580		010° 17' 33"
BP EP	3913.708 4070.778	601523.282 601551.507	6125846.856 6126001.370	157.070		010° 21' 07"
BP EP	4070.778 4093.681	601551.507 601555.120	6126001.370 6126023.986	22.903		009° 04' 37"

Set Out Table for MC01						
	CHAINAGE	EASTING	NORTHING	LENGTH	RADIUS	BEARING
BP EP	4093.681 4112.599	601555.120 601556.664	6126023.986 6126042.840	18.918		004° 40' 52"
BP EP	4112.599 4134.935	601556.664 601559.600	6126042.840 6126064.982	22.336		007° 33' 15"
BP EP	4134.935 4257.678	601559.600 601581.244	6126064.982 6126185.802	122.743		010° 09' 23"
BP EP	4257.678 4373.028	601581.244 601467.950	6126185.802 6126207.483	115.350		280° 50' 01"
TP IP TP	4373.028 4390.660 4407.326	601467.950 601450.633 601434.276	6126207.483 6126210.797 6126204.216	34.297	60.0	264° 27' 28.92"
BP EP	4407.326 4435.993	601434.276 601407.681	6126204.216 6126193.515	28.667		248° 04' 56"
BP EP	4435.993 4439.993	601407.681 601403.689	6126193.515 6126193.772	4.000		273° 40' 49"
BP EP	4439.993 4654.050	601403.689 601416.982	6126193.772 6126407.416	214.057		003° 33' 38"
BP EP	4654.050 4685.082	601416.982 601432.828	6126407.416 6126434.098	31.032		030° 42' 22"
BP EP	4685.082 4710.016	601432.828 601447.699	6126434.098 6126454.111	24.934		036° 36' 49"
BP EP	4710.016 4759.936	601447.699 601484.871	6126454.111 6126487.432	49.920		048° 07' 36"
BP EP	4759.936 4770.479	601484.871 601495.072	6126487.432 6126490.095	10.543		075° 22' 16"

Set Out Table for MC21						
	CHAINAGE	EASTING	NORTHING	LENGTH	RADIUS	BEARING
BP EP	0.000 159.246	601340.451 601350.673	6126038.264 6126197.182	159.246		003° 40' 49"
BP EP	159.246 486.628	601350.673 601371.687	6126197.182 6126523.889	327.382		003° 40' 49"

Set Out Table for MC31						
	CHAINAGE	EASTING	NORTHING	LENGTH	RADIUS	BEARING
BP EP	0.000 53.126	601403.689 601350.673	6126193.772 6126197.182	53.126		273° 40' 48"
BP EP	0.000 53.126	601403.689 601350.673	6126193.772 6126197.182	53.126		273° 40' 48"