

GENERAL

- G1. DESIGN HEREIN HAS BEEN PREPARED BY WARREN SMITH CONSULTING ENGINEERS PTY LTD, LEVEL 20, 66 GOULBURN ST, SYDNEY NSW 2000. TEL:- (02) 9299 1312, FAX:- (02) 9290 1295.
- G2. ALL DIMENSIONS IN MILLIMETRES UNO. REDUCED LEVELS AND CHAINAGES ARE IN METRES. DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS.
- G3. THE PROPOSED WORKS DETAILED HEREIN SHALL BE CONSTRUCTED TO THE REQUIREMENTS OF COUNCIL GENERALLY AS DETAILED HEREUNDER.
- G4. ALL EXISTING SERVICES SHALL BE VERIFIED FOR DEPTH AND HORIZONTAL POSITION BY PHYSICAL MEANS PRIOR TO EXCAVATION TO ENSURE CORRECT ORDERING AND DELIVERY OF MATERIALS. ANY DISCREPANCIES SHALL BE BROUGHT FORTHWITH TO THE PROJECT MANAGER'S ATTENTION.
- G5. REFERENCE SHALL BE MADE TO THE CONSTRUCTION MANAGEMENT PLAN FOR ALL SITE WORKS DETAILED HEREIN.
- G6. SPECIFICATION AND CODES CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR THE WORKS TOGETHER WITH THE REQUIREMENTS OF WSA03-WATER CODE OF AUSTRALIA AND ALL CODES OF PRACTICE REFERRED TO THEREIN AND THE REQUIREMENTS OF ALL STATUTORY AUTHORITIES
- G7. DIMENSIONS DIMENSIONS FOR EACH JOB LOT SHALL BE VERIFIED BEFORE WORKS ON THAT LOT ARE COMMENCED.
- G8. PROVISION FOR EQUIPMENT MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DRAWINGS, SHALL BE VERIFIED BY CONTRACTOR PRIOR TO PLACING CONCRETE.
- G9. CONSTRUCTION LOADS STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETE STRUCTURES. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND PROPPING WHEREVER CONSTRUCTION LOADS MAY OCCUR.
- G10. CO-ORDINATION ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH CIVIL, MECHANICAL, ELECTRICAL, HYDRAULIC AND FABRICATION DRAWINGS TOGETHER WITH SPECIFICATIONS AND SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED BY THE PRINCIPAL FROM TIME TO TIME
- G11. THE DESIGN DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE PROJECT TECHNICAL SPECIFICATIONS AND ANY DEVIATIONS FROM THESE REQUIREMENTS SHALL BE AGREED WITH THE PRINCIPAL.

CONCRETE WORKS

- GENERAL - CAST IN-SITU:
- C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600, THE STANDARDS ASSOCIATION AUSTRALIA, STANDARDS CITED IN AS3600, THE DRAWINGS AND THE SPECIFICATION.
 - C2. ALL CONCRETE SHALL BE 80mm NOMINAL SLUMP, 20mm MAXIMUM AGGREGATE WITH NO ADMIXTURES OR FLY ASH, UNLESS OTHERWISE APPROVED. ALL CONCRETE WORK IN CONTACT WITH SEWER TO HAVE TYPE SL PORTLAND CEMENT, OTHERWISE TYPE A CEMENT FOR BRIDGE WORKS, A MAXIMUM 56 DAYS SHRINKAGE OF 600 MICROSTRAIN, A MINIMUM CEMENT CONTENT 350kg/m3 AND MAXIMUM WATER:CEMENT RATIO OF 0.40.
 - C3. STRENGTH GRADE OF CONCRETE SHALL BE .25 MPa (KERBS, EDGE STRIPS & CONCRETE ENCASUREMENT) AND 32 MPa ELSEWHERE.
 - C4. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR APPROVED. GENERALLY FOR HAND PLACED KERB & GUTTER 6mm THICK APPROVED BITUMINOUS MASTIC JOINTING MATERIAL SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 6m. FOR MACHINE PLACED KERB & GUTTER 6mm THICK APPROVED BITUMINOUS MASTIC JOINTING MATERIAL SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 12m & GUILLOTINED DUMMAY GROOVED JOINTS, 25mm IN DEPTH, SHALL BE FORMED EVERY 3m OF GUTTER. JOINTS ARE ALSO REQUIRED AT EACH END OF GUTTER CROSSING AND GULLY PITS. JOINTS SHALL BE SET VERTICAL AND SQUARE TO THE KERB.
 - C5. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
 - C6. ELDING OR SPLICES IN REINFORCEMENT SHALL BE USED ONLY IN LOCATIONS APPROVED BY THE ENGINEER.
 - C7. CONCRETE CURING SHALL BE IN ACCORDANCE WITH AS3600. CURING SHALL BE COMMENCED WITHIN TWO HOURS OF FINISHING OPERATIONS AND SHALL BE CONTINUED FOR A MINIMUM OF SEVEN DAYS BY AN APPROVED PROPRIETARY COMPOUND OR BY KEEPING CONTINUOUSLY WET.
 - C8. FORMWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS3610. FORMWORK SHALL NOT BE

STRIPPED NOR PROPS REMOVED WITHOUT APPROVAL.

- C9. FABRIC LAP DETAILS SHALL BE IN ACCORDANCE WITH FIG.13.2.4 OF AS3600.
- C10. HOOKS, LAPS AND BENDS SHALL BE IN ACCORDANCE WITH AS3600 UNO.
- C11. ALL CHEMICAL ANCHORS SHALL BE EITHER 'CHEMSET' BY 'RAMSET' WITH THE GLASS CAPSULE SYSTEM INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS OR HILTI HVJ ADHESIVE ANCHOR WITH FOIL CAPSULE SYSTEM INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTION.
- C12. ALL CHEMICAL ANCHORS SHALL BE HOT DIPPED GALVANIZED AND BE MIN M16 DIA. U.N.O.

EARTH WORKS FOR SERVICES

- E1. EXCAVATE TRENCHES AND STOCKPILE ALL MATERIAL FOR INSPECTION WITH REGARD TO RE-USE FOR TRENCH BACKFILL. REMAINING MATERIAL TO BE REMOVED FROM SITE.
- E2. BEDDING MATERIAL SHALL CONSIST OF IMPORTED FILL ONLY. THICKNESS OF BEDDING LAYER SHALL BE 75mm (MIN).
- E3. EMBED ALL PIPES WITH IMPORTED FILL. PROVIDE 100mm (MIN) SIDE SUPPORT AND 100mm (MIN) OVERLAY ABOVE PIPE CROWN.
- E4. COMPACT BEDDING, EMBEDMENT AND TRENCH FILL MATERIALS SHAL BE AS PER MRWA-W-201.

RESTORATION:

- RES1. RESTORE ALL TRAFFIC AREAS TO PRE EXISTING CONDITION.
- RES2. FOR ALL SURFACES OTHER THAN IN TRAFFIC AREAS RESTORE DISTURBED SURFACES TO PRE-EXISTING CONDITIONS AND COMPACT AS SPECIFIED.
- RES3. RESTORE ALL AUTHORITY OWNED AREAS TO COUNCIL STANDARDS

ROAD WORKS, DRIVEWAYS & CARPARKS

- R1. ALLOW FOR LEVEL 2 TESTING AND SUB-GRADE CONDITIONS & PAVEMENT THICKNESS TO BE VERIFIED BY GEOTECHNICAL CONSULTANT AFTER INSPECTION OF PRELIMINARY BOXING.
- R2. ALLOW FOR ANY SUB-GRADE REPLACEMENT WORK TO BE DETERMINED AS REQUIRED BY GEOTECHNICAL CONSULTANT AT THE TIME OF PAVEMENT CONSTRUCTION.
- R3. MINIMUM DRY DENSITY RATIOS (AS 1289 3.4.1-1993) TO BE:
BASE COURSE: 98% MODIFIED
SUB-BASE: 95% MODIFIED
SUB-GRADE: 100% STANDARD
SUB-GRADE REPLACEMENT: 100% STANDARD
- R4. PAVEMENT MATERIALS TO COMPLY WITH RMS SPECIFICATION No. 3051 OR SIMILAR AS APPROVED BY GEOTECHNICAL CONSULTANT.
- R5. PROVIDE (1) TEST FOR EACH LAYER NOT EXCEEDING 250mm THICK BEING BASECOURSE, SUB-BASE & SUB-GRADE OVER AN AREA NOT GREATER THAN 500m²
- R6. SUBMIT ALL GEOTECHNICAL TEST RESULTS TO WARREN SMITH CONSULTING ENGINEERS FOR REVIEW PRIOR TO CONTINUATION WITH SUBSEQUENT SECTION OF WORK.

APPROVALS

- A1. THE AS CONSTRUCTED WORKS SHALL BE INSPECTED BY DESIGN CONSULTANT. MINIMUM 48 HOURS NOTICE SHALL APPLY TO ALL INSPECTIONS.
- A2. THE DESIGN PLANS HEREIN ARE SUBJECT TO LOCAL COUNCIL APPROVAL PRIOR TO CONSTRUCTION. OBTAIN EXPRESS (WRITTEN) ADVICE TO PROCEED FROM PROJECT MANAGER PRIOR TO COMMENCEMENT.
- A3. SUBMIT WORK-AS-EXECUTED DRAWINGS IN CIVILCAD OR DXF DIGITAL FORMAT AND HARD COPY FORMAT. VERIFY ALL CONSTRUCTION WORKS SHOWN HEREON.
- A4. CERTIFY THAT THE AS CONSTRUCTED SYSTEM HAS BEEN BUILT IN ACCORDANCE WITH THE APPROVED PLANS ISSUED FOR CONSTRUCTION.

PROTECTION OF FLORA

- F1. ANY WORKS THAT REQUIRE EXCAVATION WITHIN THE DRIP LINE OF A TREE GREATER THAN 100DBH REQUIRES SUPERINTENDENT APPROVAL.
- F2. A PERMIT TO WORK ON EACH JOB LOT MUST BE ISSUED BY SUPERINTENDENT PRIOR TO REMOVAL AND DAMAGE TO ANY FLORA.

AUTHORITY STANDARDS

- LGA 1. THE DRAWINGS HEREIN SHALL BE READ IN CONJUNCTION WITH COUNCIL STANDARDS & SPECIFICATIONS WHICH SHALL OVERRIDE SPECIAL DETAILS SHOWN ON THE DRAWINGS.

PIPELINE NOTES

- P1. ALL PIPES SHALL BE CAREFULLY EXAMINED FOR CRACKS, SCORES OR SCRATCHES IMMEDIATELY BEFORE BEING INSTALLED. PIPES WITH SCORES OR SCRATCHES ON THE EXTERNAL SURFACES DEEPER THAN 10% OF THE WALL THICKNESS SHALL BE REJECTED.
- P2. TRENCH FILL SHALL BE IN ACCORDANCE WITH MRWA-W-201.
- P3. COMPACTION SHALL BE IN ACCORDANCE WITH MRWA-W-201.
- P4. MINIMUM WIDTH OF TRENCHES (STANDARD TRENCH WIDTHS) ARE THE DIMENSIONS OF UNSUPPORTED TRENCHES OR WIDTHS INSIDE A TRENCH SUPPORT SYSTEM
- P5. WHERE MAIN CROSSES EXISTING SERVICES, THE MINIMUM VERTICAL CLEARANCE SHALL BE 150mm, EXCEPT IN THE CASE OF POWER CABLES WHERE THE MINIMUM CLEARANCE SHALL BE 225mm. WHERE THE MAIN ADJOINS EXISTING SERVICES, THE MINIMUM HORIZONTAL CLEARANCE SHALL COMPLY WITH WSA-03, TABLE SD 4.4 (AS VARIED).
- P6. DETECTABLE IDENTIFICATION TAPE FOR LOCATION OF BURIED WATER MAINS, SHALL BE IN ACCORDANCE WITH WSA-03.
- P7. NO ALLOWANCES HAS BEEN MADE FOR COMPRESSION, SETTLEMENT AD WASHING AWAY OF TRENCH FILL OR OTHER FACTORS WHICH CAN CAUSE A REDUCTION IN THE COVER OVER A PIPE. MINIMUM COVER TO PIPE SHALL BE MAINTAINED AT ALL TIMES.
- P8. THE CONTRACTOR TO ENSURE THAT MINIMUM PIPE COVER IS:
NON-ROADWAYS: MINIMUM 600mm
ROADWAYS/EMBANKMENT: 750mm
- P9. POLYETHYLENE PIPE SHALL BE MANUFACTURED TO AS/NZS 4130 POLYETHYLENE (PE) PIPES SERIES 1 PIPES OF PE COMPOUND.
- P10. PE PIPE TO BE INSTALLED IN ACCORDANCE WITH AS 2033 "INSTALLATION OF POLYETHYLENE PIPE SYSTEMS".
- P11. PE PIPES SHALL BE BUTT WELDED IN ACCORDANCE WITH WSA 01, ALL WELDS TO BE INTERNALLY DEBEADED.
- P12. JOINT TESTING OF PE MAINS SHALL BE UNDERTAKEN.
- P13. PE PIPES TO BE SNAKED DURING INSTALLATION TO ALLOW FOR THERMAL EXPANSION & CONTRACTION.
- P14. ALL ELECTROFUSION JOINTS TO BE IDENTIFIED ON THE WAC DRAWINGS.
- P15. FOR OD110 PE100 SDR11 MINIMUM BEND RADIUS TO BE 1.65m.
- P16. ALL DUCTILE IRON FITTINGS SHALL BE FUSION BONDED POLYMERIC ENCAPSULATED (INTERNALLY & EXTERNALLY.)
- P17. ALL DUCTILE IRON FITTINGS SHALL BE CLASS MINIMUM PN16 FOR THERMAL BONDED POLYMERIC LINED FITTINGS (INTERNALLY AND EXTERNALLY) AND PN35 FOR SPIGOT AND SOCKET FITTINGS.
- P18. ALL DUCTILE IRON FITTINGS SHALL BE JOINTS COATED TO AS/NZS 4158.
- P19. ALL DUCTILE IRON PIPES SHALL BE PN35.
- P20. ALL DUCTILE IRON FLANGES SHALL BE PN16.
- P21. ALL BURIED DI CL PIPES & FITTINGS TO BE WRAPPED WITH POLYETHYLENE SLEEVING COMPLYING WITH AS3680.
- P22. PUDDLE FLANGES ON DI PIPES SHALL BE FACTORY FITTED BOLT ON FULL THRUST RESTRAINT TYPE IN ACCORDANCE WITH AS/NZS 2280.
- P23. 150mm NOMINAL DIAMETER / TYTONXTREME / PN 35/ DICACCL (D150XT35CA).

DATUM

- D1. SETTING OUT COORDINATES ARE IN GDA 2020, MGA ZONE 54. SURVEY LEVELS ARE IN AHD (AUSTRALIAN HEIGHT DATUM)

TRENCHLESS CONSTRUCTION NOTES:
GENERAL NOTES:

- T1. THE CONTRACTOR SHALL FURNISH ALL LABOUR, PLANT, MATERIAL, TOOLS AND EQUIPMENT REQUIRED TO COMPLETE THE TRENCHLESS CONSTRUCTION WORKS THROUGH ALL CLASSES OF MATERIAL.
- T2. THE CONTRACTOR IS TO EVALUATE THE PROPOSED TRENCHLESS INSTALLATION DESIGN AND CONFIRM SUITABILITY OF THE EQUIPMENT, MATERIALS AND CONSTRUCTION PROCEDURES IN RELATION TO THE ACTUAL SITE TOPOGRAPHY, SOIL AND GROUNDWATER CONDITIONS, EXISTING SITE CONSTRAINTS AND ANY OTHER RELEVANT FEATURES.

LEGEND

- EXISTING WATER MAIN
- EXISTING HYDRANT
- ===== PROPOSED PRESSURE MAIN
- ✕ PROPOSED STOP VALVE
- ▶ PROPOSED AIR VALVE
- PROPOSED SCOUR

- T3. THE CONTRACTOR SHALL CONFIRM THAT THE PROPOSED CARRIER PIPE INSTALLATION AS DOCUMENTED ON THE DESIGN DRAWINGS ARE SUITABLE FOR INSTALLATION IN ACCORDANCE WITH THEIR PROPOSED CONSTRUCTION METHODOLOGY.
- T4. THE CONTRACTOR IS TO ENSURE THAT ALL PIPES USED FOR THE TRENCHLESS CONSTRUCTION ARE CAPABLE OF WITHSTANDING ALL FORCES ON THEM BEFORE, DURING AND AFTER THE INSTALLATION. ALL PIPES MUST BE ABLE TO WITHSTAND AN AXIAL COMPRESSIVE LOADING GREATER THAN THE JACKING LOAD ANTICIPATED ON THE WORKS. THE CONTRACTOR SHALL ENSURE THE PIPES ARE JACKED INTO PLACE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS WITHOUT DAMAGING THE PIPE JOINTS OR THE PIPE SECTION.
- T5. THE CONTRACTOR SHALL REVIEW THE PROJECT GEOTECHNICAL REPORT AND ENSURE THAT THE GEOTECHNICAL REPORT PROVIDED IS SUFFICIENT TO COMPLETE THE WORK. THE CONTRACTOR SHALL CONFIRM WHETHER ANY ADDITIONAL GEOTECHNICAL INVESTIGATIONS ARE REQUIRED, IF IT IS DEEMED THAT THE PROVIDED GEOTECHNICAL INFORMATION IS INSUFFICIENT TO COMPLETE THE TRENCHLESS WORKS AND MINIMISE ANY RISK TO THE PROJECT.
- T6. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURES, UTILITIES AND SERVICES. IN PLANNING AND EXECUTION OF THE WORKS, ALL POTENTIAL AFFECTED WORK AREA SHALL BE VISUALLY INSPECTED TO DOCUMENT CONDITION PRIOR TO ANY WORK BEING UNDERTAKEN. ANY DAMAGE TO ADJACENT PROPERTIES PART OF THIS WORK SHALL BE REPAIRED AND REINSTATED AT THE CONTRACTOR'S EXPENSE.
- T7. THE CONTRACTOR SHALL ENSURE THAT THE GUIDANCE SYSTEM FOR THE TRENCHLESS INSTALLATION IS ADEQUATE TO ENABLE THE BORE HEAD TO BE CONTROLLED AT ALL TIMES.
- T8. THE CONTRACTOR SHOULD MEASURE AND RECORD THE EXACT POSITION OF THE BORE TO ENSURE ALIGNMENT IS WITHIN THE SPECIFIED TOLERANCES. THE CONTRACTOR SHALL MAKE IMMEDIATE CORRECTIONS TO ALIGNMENT BEFORE ALLOWABLE TOLERANCES ARE EXCEEDED IF A MIS-ALIGNMENT IS RECORDED.
- T9. IF A STOPPAGE IN THE FORWARD PROGRESS OF THE WORKS IS ENCOUNTERED, THE CAUSE OF THE STOPPAGE SHALL BE DETERMINED BY THE CONTRACTOR. WHEN THE CAUSE HAS BEEN IDENTIFIED, THE INSTALLATION METHOD SHALL BE MODIFIED TO BEST SUIT THE ACTUAL CONDITIONS ENCOUNTERED.
- T10. THE CONTRACTOR SHALL BE REQUIRED TO MEASURE, RECORD AND REPORT ANY GROUND SETTLEMENT TO THE SATISFACTION CRITERIA AS AGREED WITH THE RELEVANT AUTHORITY I.E. ROADS, RAILWAYS OR ANY OTHER AS REQUIRED.
- T11. SHOULD APPRECIABLE LOSS OF GROUND OCCUR DURING THE MIRCROTUNNELLING OPERATION, THE VOIDS SHALL BE BACKFILLED WITH SOIL PROMPTLY AS FAR AS PRACTICABLE. WHERE THE SOIL IS NOT SUITABLE FOR THIS PURPOSE, THE CONTRACTOR SHALL IMPORT SUITABLE MATERIALS. THE RETIFICATION OF ALL VOIDS SHALL BE RECORDED AND REPORTED TO THE PROJECT MANAGER.
- T12. HYDROSTATIC PRESSURE TESTING AND CCTV INSPECTION FOR PIPE SHALL BE USED TO COMPLETE THE NECESSARY TEST REQUIREMENTS AS REQUIRED. TESTING OF INDIVIDUAL PIPE JOINTS SHALL BE APPLIED TO THE APPROPRIATE METHODS (IN COMPLIANCE WITH ASTM C828, ASTM C1103, ASTM C969, BS5911) TO COMPLETE THE TESTING REQUIREMENTS. OTHER METHODS RELATING TO PIPE JOINTS TESTING WITH LINER SHALL ALSO BE PRESENTED IF REQUIRED.

INFORMATION TO BE SUBMITTED:

- I1. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL SUBMIT A CLEAR AND DETAILED WORK STATEMENT FOR THE EXECUTION OF THE TRENCHLESS INSTALLATION THAT SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING:

- SAFETY MANAGEMENT PLAN,
- TRAFFIC MANAGEMENT PLAN,
- QUALITY MANAGEMENT PLAN,
- GENERAL DESCRIPTION OF THE CONSTRUCTION METHOD, PROPOSED MACHINERY THAT WILL BE USED, METHOD OF CONTROLLING VERTICAL AND HORIZONTAL ALIGNMENT, SEQUENCE OF OPERATIONS AND TYPE OF SHORING.
- LOCATION OF EXISTING UNDERGROUND UTILITY SERVICES AND PROPOSED SPECIAL PRECAUTIONS OR RELOCATION IF REQUIRED,
- GROUND MONITORING EQUIPMENT AND METHODS,
- CONFIRMATION THAT THE PROPOSED EQUIPMENT IS CAPABLE OF ACHIEVING THE TOLERANCES IN LINE AND LEVEL AS SPECIFIED,
- GROUT SPECIFICATION AND PIPE SPACER DETAILS AS REQUIRED
- SITE LAYOUT DRAWINGS SHOWING LOCATION OF LAUNCH AND RECEIVING PITS (SIZE, DEPTH AND LOCATION), EQUIPMENT POSITIONING AND SLURRY CONTAINMENT AREAS.
- METHOD OF SOIL TRANSPORTATION FROM SHAFT, TEMPORARY SPOIL HAULAGE EQUIPMENT, AND DISPOSAL LOCATION,

Path: X:\2024\2024_11_14_140
 Plot Date: 22/02/2024@11:14:40
 User: jhaid
 Login Name: jhaid
 Cad File: T:\M0075\Drawings\AutoCAD\Civil\Design\Civil_2D\M0075-WSE-02-DR-02-General-Master.dwg

DO NOT SCALE FROM DRAWINGS, CHECK & VERIFY ALL DIMENSIONS & LEVELS BEFORE COMMENCEMENT OF ANY WORK.

THIS DRAWING IS NOT TO BE COPIED IN PART OR WHOLE WITHOUT WRITTEN PERMISSION FROM WARREN SMITH CONSULTING ENGINEERS.

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

REVISION	AMENDMENT	DATE	REVISION	AMENDMENT	DATE
1	CONCEPT DESIGN	21/07/2023			
2	CONCEPT DESIGN	16/02/2024			

PROJECT

**MOORELIC POULTRY FARM
DEVELOPMENT SITE WATER
SUPPLY - CONCEPT**

PREPARED BY

WSce Pty Ltd
ACN 668 655 141
ABN 75 668 655 141
info@wsce.com.au
www.wsce.com.au

Driven by excellence,
built on experience.

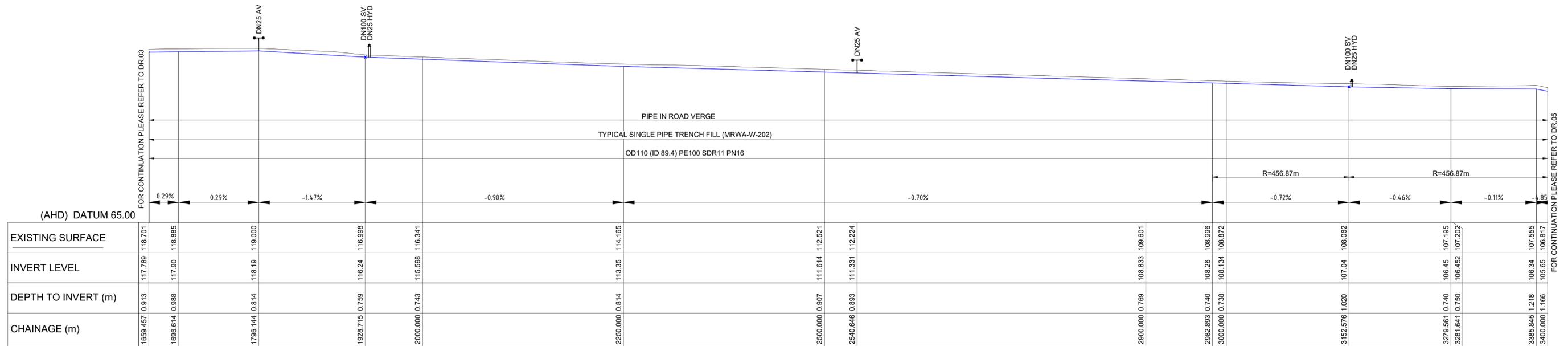
GENERAL NOTES				
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
AS SHOWN	NL	JH	CC	PG
JOB No.	DRAWING No.		ISSUE	
M0075	DR.02		2	
DATE	STATUS			
FEB 2024	CONCEPT DESIGN			

CONCEPT DESIGN



PLAN
SCALE: 1:2500

LEGEND (Ecological Vegetation Classes (EVCs))	
	125 PLAINS GRASSY WETLAND



Proposed Watermain Long Section
SCALES: HORIZONTAL 1:2500 VERTICAL 1:625

NOTES:

- EXISTING SURFACE LEVELS OBTAINED FROM LIDAR DATA AND ALL LEVELS AND GROUND FEATURES TO BE CONFIRMED BY DETAILED TOPOGRAPHICAL SURVEY.
- EXISTING SERVICES HAVE BEEN TRACED FROM DBYD PLANS AND NEEDS TO BE SURVEYED AND VERIFIED ON SITE.
- EXISTING SERVICES ARE NOT SHOWN ON THE LONG SECTIONS AS THE DEPTHS ARE UNKNOWN.
- PIPELINE ROUTE LOCATION NEEDS TO BE CONFIRMED WITH THE RELEVANT AUTHORITY FOR ACCEPTANCE.
- CONSENT TO CONSTRUCT PIPELINE WITHIN PRIVATE PROPERTY TO BE OBTAINED BY OTHERS.
- PROPOSED SCOUR VALVE REFER TO BW-SD-W010-R0 TYPE A
- PROPOSED HYDRANT AND AIR VALVE REFER TO MRWA-W-305 FOR DETAIL.

W:\Projects\2024\12164628\12164628_1\11_Plan\Watermain\DWG\DWG\030303_Plan\030303_Plan.dwg
 Plot Date: 22/02/2024 11:20:16 Login Name: jphab Call No: 1300720000



NORTH



DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

REVISION	AMENDMENT	DATE	REVISION	AMENDMENT	DATE
1	CONCEPT DESIGN	21/07/2023			
2	CONCEPT DESIGN	16/02/2024			

CLIENT

PROJECT

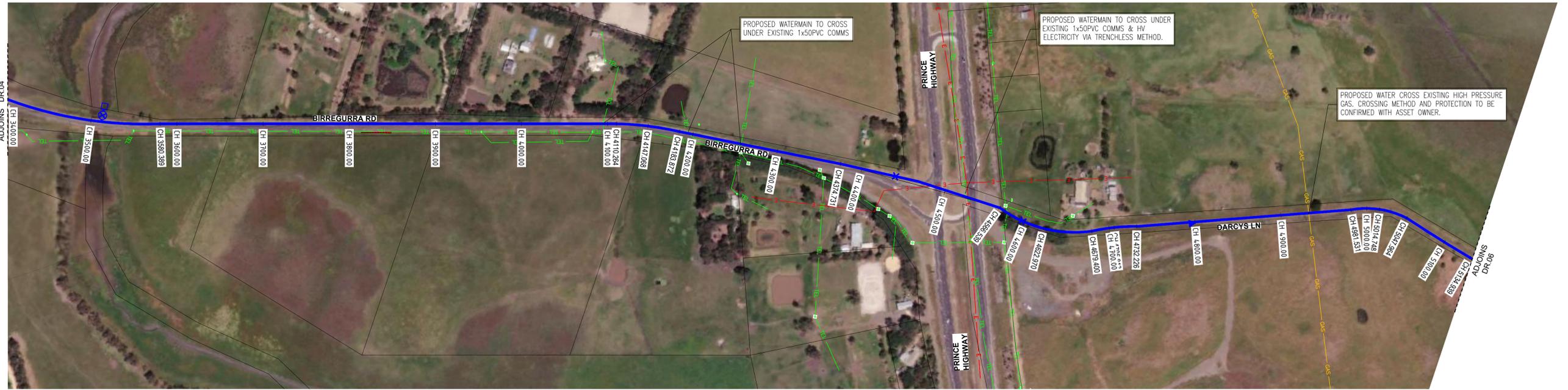
**MOORELIC POULTRY FARM
DEVELOPMENT SITE WATER
SUPPLY - CONCEPT**

PREPARED BY

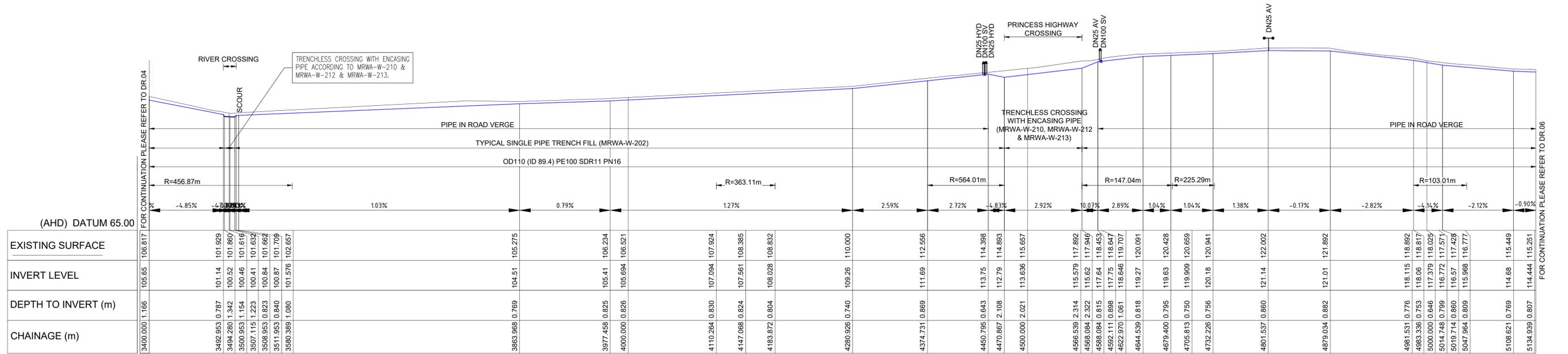
WSce Pty Ltd
ACN 668 655 541
ABN 75 668 655 541
info@wsce.com.au
wsce.com.au

Driven by excellence,
built on experience.

TITLE				
PLAN AND LONGSECTION				
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
AS SHOWN	NL	JH	CC	PG
JOB No.	DRAWING No.		ISSUE	
M0075	DR.04		2	
DATE	STATUS			
FEB 2024	CONCEPT DESIGN			



PLAN
SCALE: 1:2500



Proposed Watermain Long Section
SCALES: HORIZONTAL 1:2500 VERTICAL 1:625

- NOTES:
- EXISTING SURFACE LEVELS OBTAINED FROM LIDAR DATA AND ALL LEVELS AND GROUND FEATURES TO BE CONFIRMED BY DETAILED TOPOGRAPHICAL SURVEY.
 - EXISTING SERVICES HAVE BEEN TRACED FROM DBYD PLANS AND NEEDS TO BE SURVEYED AND VERIFIED ON SITE.
 - EXISTING SERVICES ARE NOT SHOWN ON THE LONG SECTIONS AS THE DEPTHS ARE UNKNOWN.
 - PIPELINE ROUTE LOCATION NEEDS TO BE CONFIRMED WITH THE RELEVANT AUTHORITY FOR ACCEPTANCE.
 - CONSENT TO CONSTRUCT PIPELINE WITHIN PRIVATE PROPERTY TO BE OBTAINED BY OTHERS.
 - PROPOSED SCOUR VALVE REFER TO BW-SD-W010-R0 TYPE A
 - PROPOSED HYDRANT AND AIR VALVE REFER TO MRWA-W-305 FOR DETAIL.

W:\M0075\01\DWG\DWG\M0075_01_DR05.dwg
 Plot Date: 22/02/2024 11:16:10
 User Name: jphair
 Call No: 1300750000
 Project Name: Moorelic Poultry Farm Development Site Water Supply - Concept



SCALE 1:2500 A1 SHEET

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

REVISION	AMENDMENT	DATE	REVISION	AMENDMENT	DATE
1	CONCEPT DESIGN	21/07/2023			
2	CONCEPT DESIGN	16/02/2024			

CLIENT

PROJECT

**MOORELIC POULTRY FARM
DEVELOPMENT SITE WATER
SUPPLY - CONCEPT**

PREPARED BY

WSce Pty Ltd
ACN 668 655 541
ABN 75 668 655 541
info@wsce.com.au
wsce.com.au

Driven by excellence,
built on experience.

TITLE				
PLAN AND LONGSECTION				
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
AS SHOWN	NL	JH	CC	PG
JOB No.	DRAWING No.	ISSUE		
M0075	DR.05	2		
DATE	STATUS			
FEB 2024	CONCEPT DESIGN			



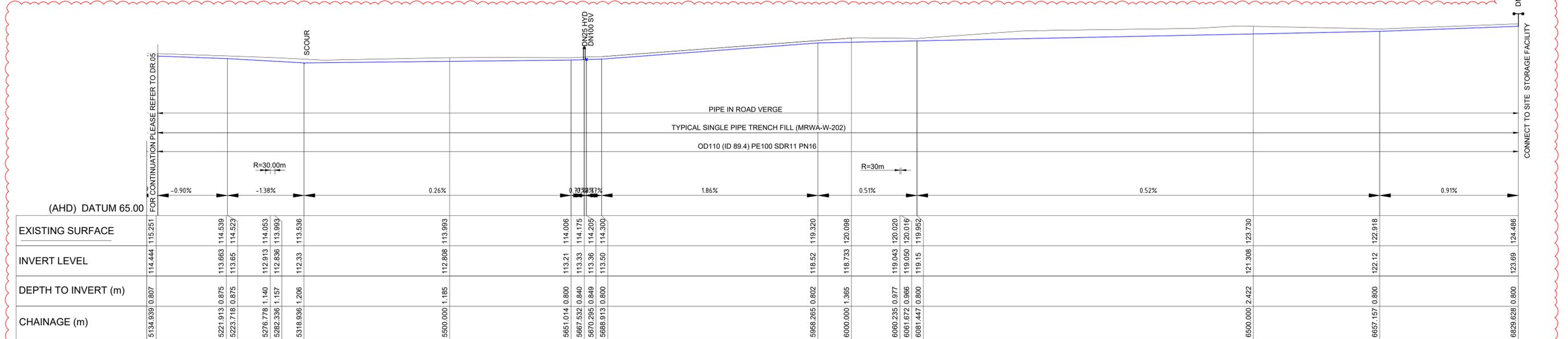
NOTES:

- EXISTING SURFACE LEVELS OBTAINED FROM LIDAR DATA AND ALL LEVELS AND GROUND FEATURES TO BE CONFIRMED BY DETAILED TOPOGRAPHICAL SURVEY.
- EXISTING SERVICES HAVE BEEN TRACED FROM DBYD PLANS AND NEEDS TO BE SURVEYED AND VERIFIED ON SITE.
- EXISTING SERVICES ARE NOT SHOWN ON THE LONG SECTIONS AS THE DEPTHS ARE UNKNOWN.
- PIPELINE ROUTE LOCATION NEEDS TO BE CONFIRMED WITH THE RELEVANT AUTHORITY FOR ACCEPTANCE.
- CONSENT TO CONSTRUCT PIPELINE WITHIN PRIVATE PROPERTY TO BE OBTAINED BY OTHERS.
- PROPOSED SCOUR VALVE REFER TO BW-SD-W010-R0 TYPE A
- PROPOSED HYDRANT AND AIR VALVE REFER TO MRWA-W-305 FOR DETAIL.

PLAN
SCALE: 1:2500

LEGEND (Ecological Vegetation Classes (EVCs))

125 PLAINS GRASSY WETLAND



NOTES:

- EXISTING SURFACE LEVELS OBTAINED FROM LIDAR DATA AND ALL LEVELS AND GROUND FEATURES TO BE CONFIRMED BY DETAILED TOPOGRAPHICAL SURVEY.
- EXISTING SERVICES HAVE BEEN TRACED FROM DBYD PLANS AND NEEDS TO BE SURVEYED AND VERIFIED ON SITE.
- EXISTING SERVICES ARE NOT SHOWN ON THE LONG SECTIONS AS THE DEPTHS ARE UNKNOWN.
- PIPELINE ROUTE LOCATION NEEDS TO BE CONFIRMED WITH THE RELEVANT AUTHORITY FOR ACCEPTANCE.
- CONSENT TO CONSTRUCT PIPELINE WITHIN PRIVATE PROPERTY TO BE OBTAINED BY OTHERS.
- PROPOSED SCOUR VALVE REFER TO BW-SD-W010-R0 TYPE A
- PROPOSED HYDRANT AND AIR VALVE REFER TO MRWA-W-305 FOR DETAIL.

Proposed Watermain Long Section
SCALES: HORIZONTAL 1:2500 VERTICAL 1:625

W:\M0075\GIS\DWG\DWG\M0075-01-01.dwg
 Plot Date: 22/02/2024 11:24
 User Name: jphub
 Call No: 1300750000
 W:\M0075\GIS\DWG\DWG\M0075-01-01.dwg



DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

REVISION	AMENDMENT	DATE	REVISION	AMENDMENT	DATE
1	CONCEPT DESIGN	21/07/2023			
2	CONCEPT DESIGN	16/02/2024			

CLIENT

PROJECT

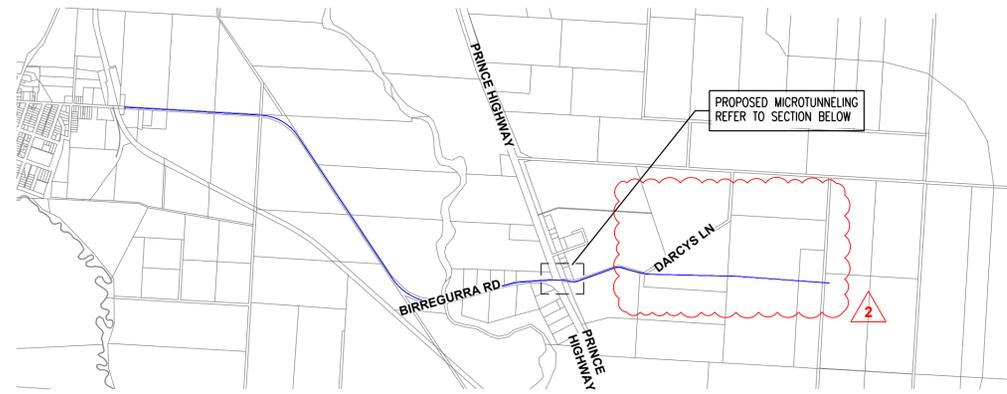
MOORELIC POULTRY FARM DEVELOPMENT SITE WATER SUPPLY - CONCEPT

PREPARED BY

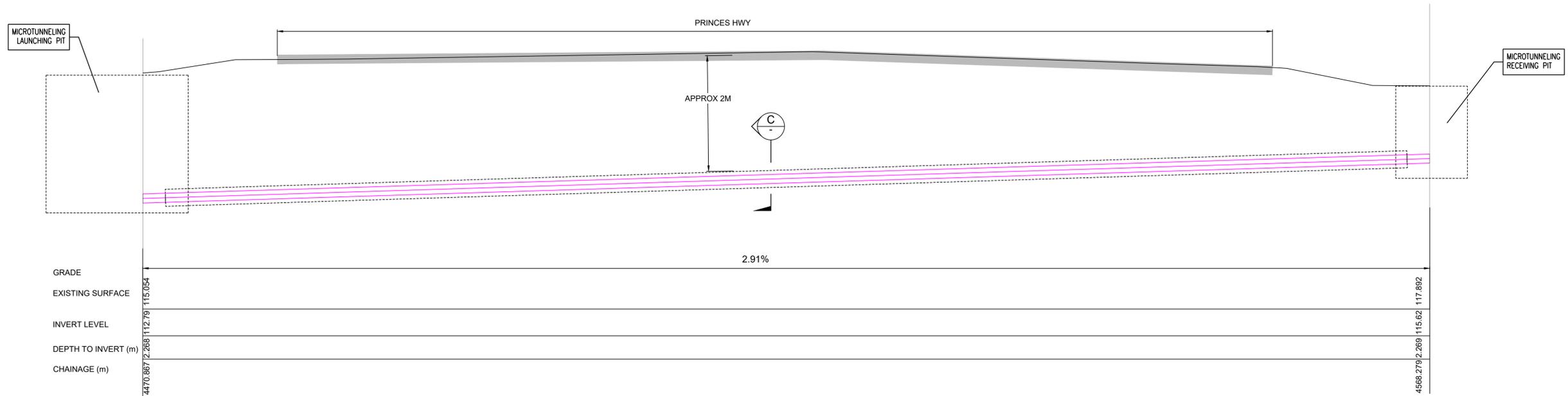
WSce Pty Ltd
ACN 668 655 541
ABN 75 668 655 541
info@wsce.com.au
wsce.com.au

Driven by excellence, built on experience.

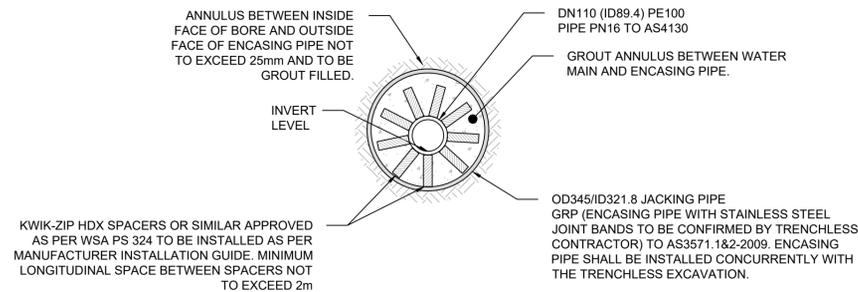
TITLE				
PLAN AND LONGSECTION				
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
AS SHOWN	NL	JH	CC	PG
JOB No.	DRAWING No.		ISSUE	
M0075	DR.06		2	
DATE	STATUS			
FEB 2024	CONCEPT DESIGN			



**PRINCES HIGHWAY CROSSING
PLAN VIEW**
Scale NTS



**PRINCES HIGHWAY CROSSING
SECTION VIEW**
Scale 1:100



C SECTION
SCALE 1:10

Utility (Existing or proposed service)	Minimum horizontal clearance		Minimum vertical clearance
	mm		
	New main size		
	<DN 200	>DN 200	
Water mains >DN 375	Refer MRWA-W-202	Refer MRWA-W-202	300
Water mains ≤DN 375	Refer MRWA-W-202	Refer MRWA-W-202	150
Gas mains	Refer MRWA-W-202	Refer MRWA-W-202	150
Telecommunication conduits and cables	300	600	150
Electricity conduits and cables	500	1000	225
Stormwater drains	300	600	150
Sewers – gravity	1000/600	1000/600	500
Kerbs	300	300	Refer MRWA-W-202 (i.e. min cover)

WATER MAIN CLEARANCES
(EXTRACTED FROM WSA-03 TABLE 5.5)

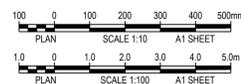
CONCEPT DESIGN

Path: X:\2024\7575_P1_H1_M0075_CAD_P1EA_B01
 Part Date: 22/02/2024@11:52:30 Login Name: jphad
 Cad File: T:\M0075\Drawings\A1\A1\DWG\CAD\M0075-WSE-03-DR-09.DWG

DO NOT SCALE FROM DRAWINGS, CHECK & VERIFY ALL DIMENSIONS & LEVELS BEFORE COMMENCEMENT OF ANY WORK.

THIS DRAWING IS NOT TO BE COPIED IN PART OR WHOLE WITHOUT WRITTEN PERMISSION FROM WARREN SMITH CONSULTING ENGINEERS.

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR



REVISION	AMENDMENT	DATE	REVISION	AMENDMENT	DATE
1	CONCEPT DESIGN	21/07/2023			
2	CONCEPT DESIGN	16/02/2024			

CLIENT

PROJECT
MOORELIC POULTRY FARM DEVELOPMENT SITE WATER SUPPLY - CONCEPT

PREPARED BY

WSce Pty Ltd
ACN 668 655 141
ABN 75 668 655 141
info@wsce.com.au
wsce.com.au

Driven by excellence, built on experience.

TITLE
TYPICAL TRENCHLESS CROSSING DETAIL

SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
AS SHOWN	NL	JH	CC	PG
JOB No.	DRAWING No.		ISSUE	
M0075	DR.09		2	
DATE	STATUS			
JULY 2023	CONCEPT DESIGN			