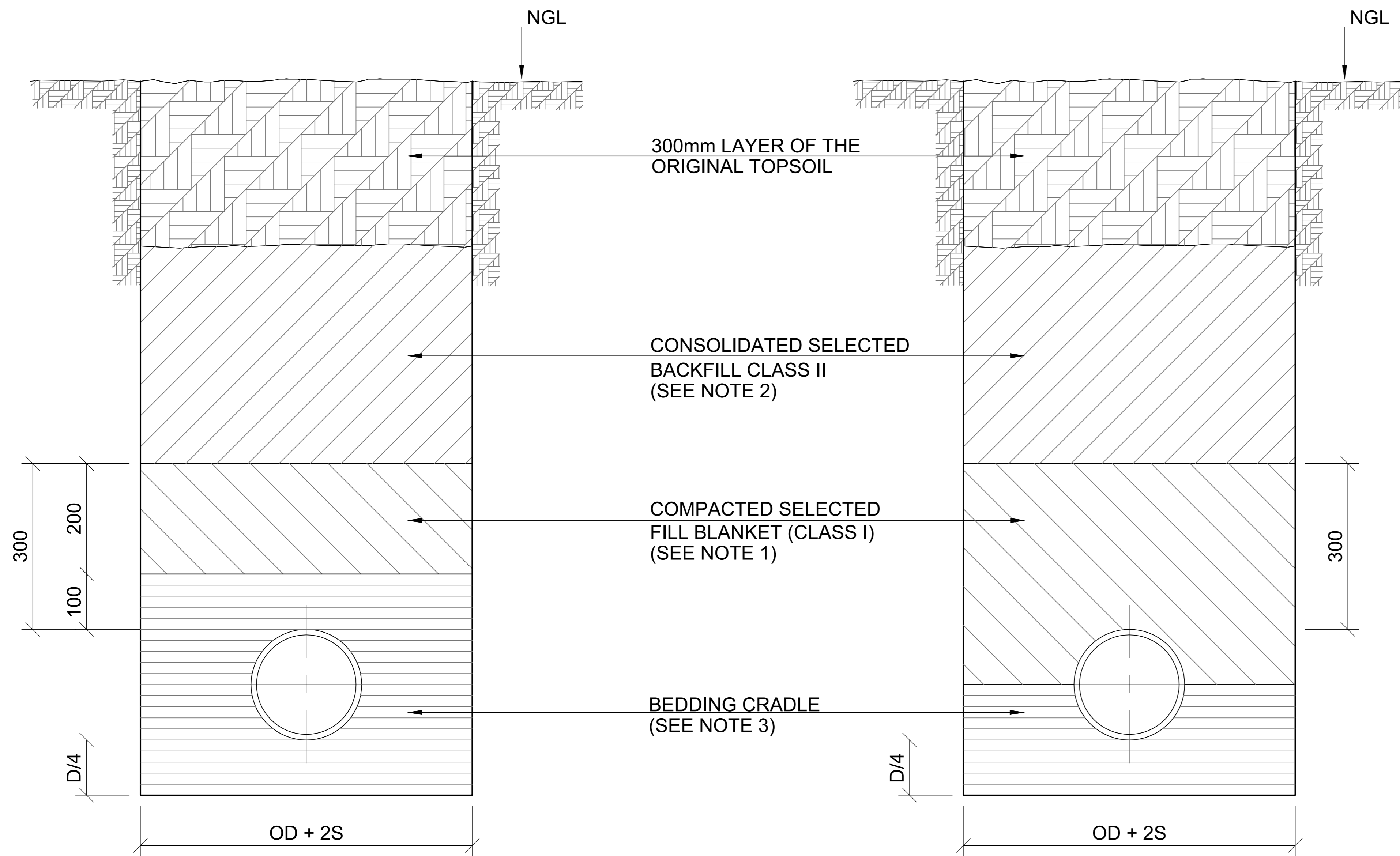


PIPE DIAMETER (ND)	TRENCH WIDTH (OD + 2S)
75	675.000
90	690.000
110	710.000
125	725.000
140	740.000
160	760.000
200	800.000
250	850.000
315	915.000
355	955.000
UNLESS OTHERWISE SPECIFIED	

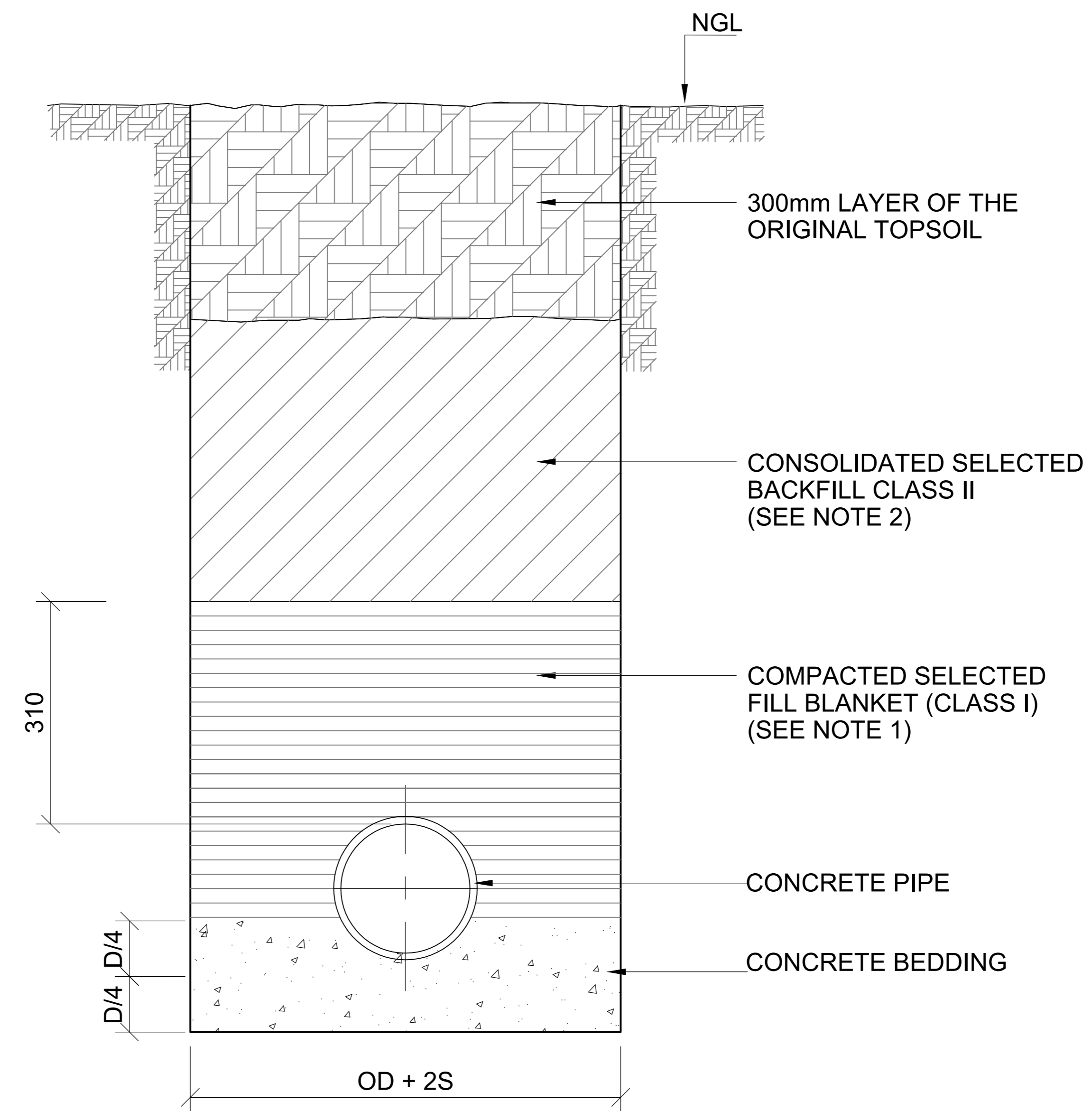
BACKFILL NOTES:

1. SELECTED BACKFILL CLASS I: IMPLIES APPROVED SELECTED MATERIAL FROM TRENCH EXCAVATION, FREE FROM STONES AND WITH AN OPTIMUM MOISTURE CONTENT
2. SELECTED BACKFILL CLASS II: IMPLIES SELECTED BACKFILL FROM TRENCH EXCAVATION, WHICH SHALL NOT CONTAIN ANY STONES LARGER THAN 150mmØ
3. CLASS B BEDDING CRADLE SHALL CONSIST OF AN APPROVED SELECTED GRAVEL MATERIAL WITH PI NOT EXCEEDING 6, FREE FROM STONES EXCEEDING 20mm, ORGANIC MATTER AND LUMPS OF CLAY
4. CLASS 'A' BEDDING/ENCASING CONCRETE BETWEEN JOINTS SHALL BE CARRIED OUT IN ONE CONTINUOUS OPERATION USING CLASS 30 CONCRETE



CLASS "B" BEDDING FOR FLEXIBLE PIPELINE
SELECTED BACKFILL BEDDINGS FOR uPVC AND HDPE PIPES
NTS

CLASS "B" BEDDING FOR RIGID PIPELINE
SELECTED BACKFILL BEDDINGS FOR CONCRETE PIPES
NTS



CLASS "A" BEDDING FOR RIGID PIPELINE
SELECTED BACKFILL BEDDINGS FOR CONCRETE PIPES
NTS

GENERAL NOTES:

- THIS DESIGN WAS ENGINEERED BY:
SEA PROJECTS AND ENGINEERING (PTY) LTD
1. ALL MATERIALS AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SANS PROJECT SPECIFICATIONS.
 2. ALL DIMENSIONS IN MILLIMETERS.
 3. ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.
 4. ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATION FOR MUNICIPAL CIVIL ENGINEERING WORKS.
 5. FINAL POSITION TO BE DETERMINED ON SITE.
 6. ALL CONCRETE MIXES TO BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
 7. EXCAVATIONS TO BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
 8. ALL MASS CONCRETE TO BE 15MPa/19 UNLESS STATED OTHERWISE BY THE ENGINEER.
 9. BENCHING SHALL BE FINISHED WITH A 20mm DOLOMITIC LAYER PLACED WHILE CONCRETE IS STILL GREEN AND STEEL FLOAT TO SMOOTH FINISHED.
 10. BACKFILL TO BE DONE WITH G5 MATERIAL COMPACTED IN LAYERS OF 150mm THICK TO 95% MDD ASHTO AT OMC.
 11. CHANNELING MUST BE BUILT WITH GLAZED EARTHENWARE OR FIBRE CEMENT CHANNEL RECESSED INTO CONCRETE FOUNDATION.
 12. EXCAVATION PRIOR TO TRENCH EXCAVATIONS AND CONFIRM LEVELS.
 13. COMPACTION OF BEDDING MATERIAL AROUND PIPE TO BE DONE WITH SPECIAL CARE.
 14. ALL PIPES TO BE PRESSURE TESTED TESTED AFTER COMPLETION.

LEGEND

▲ Benchmark	⊕ Sign Post	▨ Concrete Paving	— Culvert
⊙ Electric Pole	⊕ Steel Pole	▨ Brick Paving	— Drain
⊕ Sign Board	⊕ Staircase	▨ Tarred Road	— Top of pipe
⊕ Fibre Manhole	⊕ Water Valve	▨ Dust Road	— Fence
⊕ Lamp Post	⊕ Valve Manhole	▨ Driveway	— Wall
⊕ Fire Hydrant	⊕ Bollard	▨ Railway	— Bottom Kerb
⊕ Tree	⊕ Wooden Pole	⊕ Gate	— Top Kerb
⊕ Water Meter	⊕ Water Tank	⊕ Electric Box	— Minor Contour
⊕ Sewer Manhole	⊕ Insert Level	⊕ Rock	— Major Contour
⊕ Unknown Manhole	⊕ Stormwater Manhole		

DESIGN COORDINATOR APPROVAL:

SIGNATURE _____ DATE _____

PROJECT MANAGER APPROVAL:

SIGNATURE _____ DATE _____

CLIENT APPROVAL:

SIGNATURE _____ DATE _____

REVISIONS

NO.	DATE	DESCRIPTION	BY:	CHK:	APPR:
A	28/05/2026	ISSUED FOR TENDER	C.K.	M.R.	S.N.

DESIGNED:	DRAWN:	CHECKED:	APPROVED:	DATE:	SCALE:
M.R	C.K	M.R	S.N	29/05/2026	N.T.S

CLIENT:



Maquassi Hills Local Municipality

MAQUASSI HILLS LOCAL MUNICIPALITY
Private Bag X3
19 Krugger Street
Wolmaranstad
2630

TEL: (018) 596 1068
FAX: (018) 596 1555
WEB: www.maquassihills.co.za

PROJECT:
REPLACEMENT OF ASBESTOS CEMENT BULK AND RETICULATION PIPELINES

DRAWING TITLE:
MAKWASSIE RETICULATION:
TYPICAL DETAILS : TRENCH DETAILS

CONSULTANTS:
SEA PROJECTS AND ENGINEERING



7107 Rosewood Road
Broadacres
Gauteng
2169

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SIZE:	PROJECT NO.:	DRAWING NO.:	SHEET NO.:	REVISION:
A0	20241003	DRG-CIV-009	01	A