

NOTES:

- ALL PIPE CONNECTIONS TO SEPARATOR TO HAVE FLEXIBLE JOINTS.
- ALL BRICKWORK TO BE 10.5 MPa IN CLASS 2 MORTAR, WITH 15mm THICK PLASTER.
- ALL MANHOLES, SEWAGE LINES AND SEPARATOR TO BE TESTED ACCORDING TO SANS 1200 LD.
- ALL CONCRETE WORKS TO BE TESTED ACCORDING TO SANS 1200 GA AND RESULTS SUBMITTED TO ENGINEER FOR APPROVAL.
- BACKFILL TO SIDES OF SEPARATOR TO BE COMPACTED TO 93% MOD AASHTO IN 150mm LAYERS ACCORDING TO SANS 1200 DB.
- ALL EXPOSED CORNERS OF CONCRETE TO BE CHAMFERED 25mm.
- IN-SITU PERCOLATION TEST TO BE DONE AT SITE OF FRENCH DRAIN BY CONTRACTOR ACCORDING TO SANS 400 PP28 PRIOR TO CONSTRUCTION OF FRENCH DRAIN.
- ADJACENT SHEETS OF MESH AND REINFORCEMENT TO OVERLAP AT LEAST 400mm.
- ALL MESH TO HAVE A COVER OF 30mm.

CONSTRUCTION NOTES:

- NO PART OF THIS DRAWING MAY BE SCALED.
- CONTRACTOR TO VERIFY COORDINATES, LEVELS, AND POSITION OF ALL BENCHMARKS AND EXISTING SERVICES PRIOR TO COMMENCING WITH CONSTRUCTION.
- ALL DISCREPANCIES TO BE REPORTED TO ENGINEER IMMEDIATELY.
- ALL PIPES, FITTINGS, SPECIALS AND CONCRETE WORKS TO BE STORED, CONSTRUCTED AND TESTED ACCORDING TO SANS 1200.
- CONTRACTOR TO PROTECT ALL EXISTING SERVICES AGAINST ANY DAMAGE.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECT DRAWINGS.
- CONTRACTOR TO LIAISE WITH SUPERVISING ENGINEER DURING SETTING OUT OF LINES.
- ALL SETTING OUT, LEVELS, JOINTS AND BEDDING TO BE CHECKED BY ENGINEER PRIOR TO COVERING OF WORKS.
- MINIMUM PIPE INVERT LEVELS TO BE 600mm AND 1000mm WITHIN ROAD RESERVE.
- ALL MANHOLE FINAL LEVELS TO BE FINAL GROUND LEVEL +200mm.
- ALL PIPE SECTIONS WITH INVERT SHALLOWER THAN 0.5m TO BE ENCASED IN CONCRETE AS PER DETAIL.

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DESIGNED	M. SANYAUKE
APPROVED PROFESSIONAL ENGINEER	
DATE	

REFURBISHMENT OF TRANS KALAHARI BORDER TO A ONE STOP BORDER POST

NamRA
Namibia Revenue Agency

NAMIBIA REVENUE AGENCY
10 JOHN MEINERT & MOKETE STREET, WINDHOEK
TEL: (061) 209 2259

FOR BIDDING

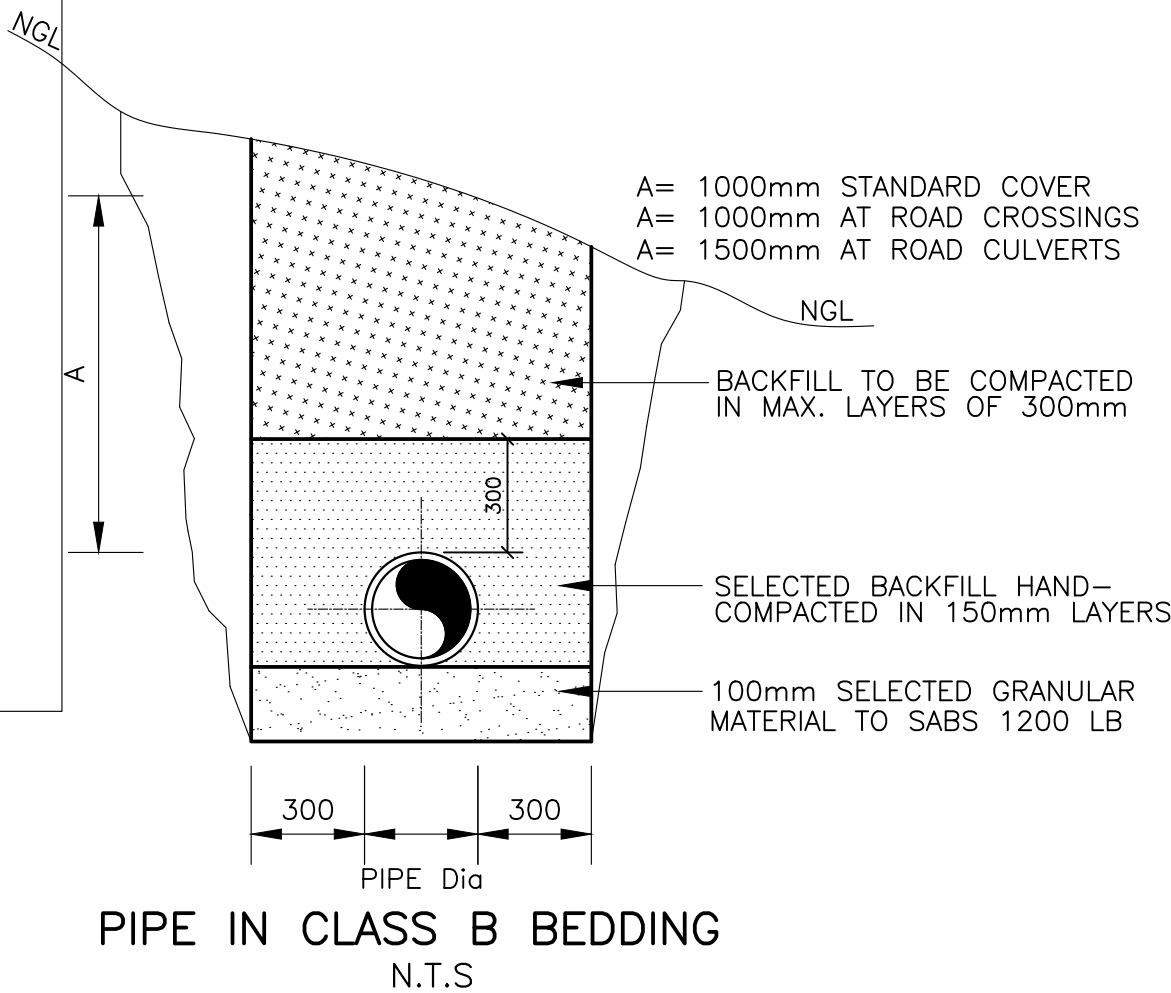
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NUMBER: D0121/SK-01

SCALE ON A1: AS SHOWN

REVISION: A

NO	DESCRIPTION	ENG.	DATE

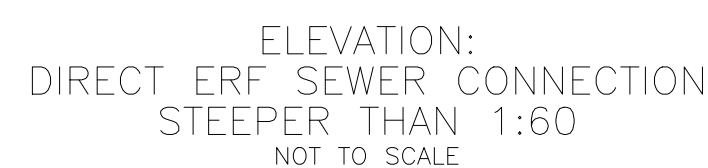


STANDARD PIPE TEST (TO RE READ IN CONJUNCTION WITH SANS
1200)

7.2.1 AIR TEST

A) PIPELINES ABOVE THE WATER TABLE:
AN APPROVED AIR-TESTING MACHINE SHALL BE USED TO RAISE THE GAUGE PRESSURE IN THE SECTION OF THE PIPELINE UNDER TEST FIRST TO 3.75 KPA. AFTER A 2 MIN STABILIZATION PERIOD THE PRESSURE SHALL BE REDUCED TO 2.5 KPA. THE MACHINE SHALL THEN BE SWITCHED OFF AND THE TIME TAKEN FOR THE PRESSURE TO DROP FROM 2.5 KPA TO 1.25 KPA SHALL BE DETERMINED. THE TIME TAKEN SHALL BE AT LEAST THE APPLICABLE OF THE FOLLOWING VALUES:

B) PIPELINES BELOW THE WATER TABLE:
AN APPROVED AIR TESTING MACHINE SHALL BE USED TO RAISE THE GAUGE PRESSURE IN THE SECTION OF THE PIPELINE UNDER TEST TO 2.5 KPA ABOVE THE STATIC WATER PRESSURE. AFTER THIS PRESSURE HAS BEEN ATTAINED AND THE MACHINE STOPPED ANY CHANGE IN PRESSURE SHALL BE NOTED. THERE SHALL BE NO DISCERNIBLE LOSS FOR A PERIOD OF AT LEAST 5 MIN.



1. NO PART OF THIS DRAWING MAY BE SCALED.
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3. REFER TO DRAWING NO.: D0121/SC-00 FOR STANDARD NOTES.
4. ALL MATERIAL, TEST AND WORKMANSHIP TO BE ACCORDING TO SANS 1200 UNLESS OTHERWISE STATED.
5. CONTRACTOR TO PROTECT ALL EXISTING SERVICES AGAINST ANY DAMAGE.
6. THIS DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECT DRAWINGS.

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APPROVED PROFESSIONAL ENGINEER	
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DATE	
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REFURBISHMENT OF TRANS
KALAHARI BORDER
TO A ONE STOP BORDER
POST

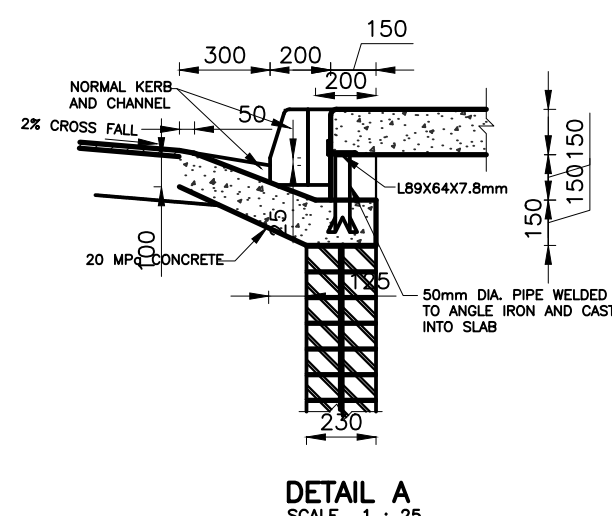
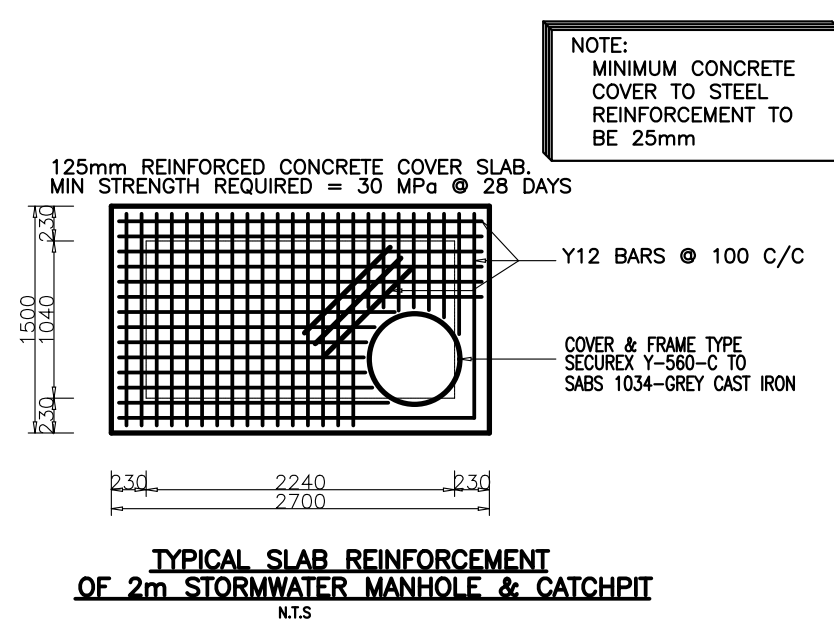
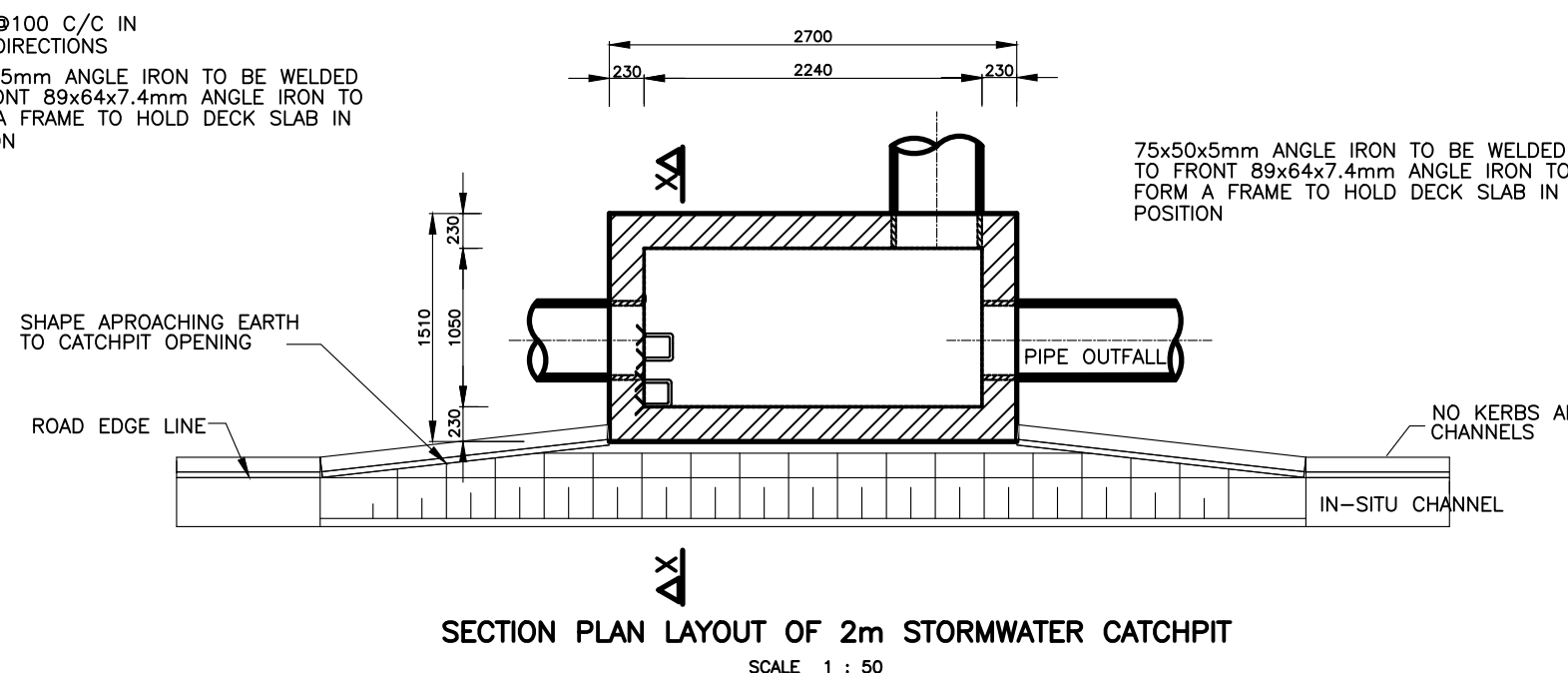
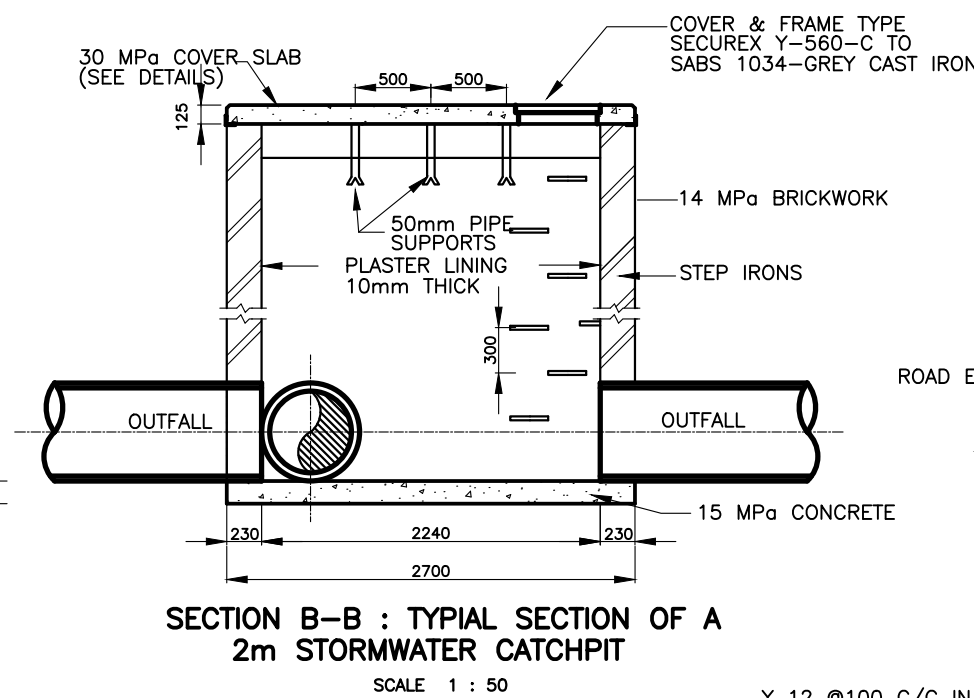


TITLE:	SEWER DETAILS SHEET 2
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SCALE ON A1: AS SHOWN

REVISION: A

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SETTING OUT POSITION OF STORMWATER PIPES	
ROAD RESERVE WIDTH	DISTANCE TO CENTER OF SW PIPE FROM NEAREST KERB LINE (X)
12M	0.75m
13M	0.75m
15M	0.75m
18M	0.875m
20M	1.00m
30M	1.00m

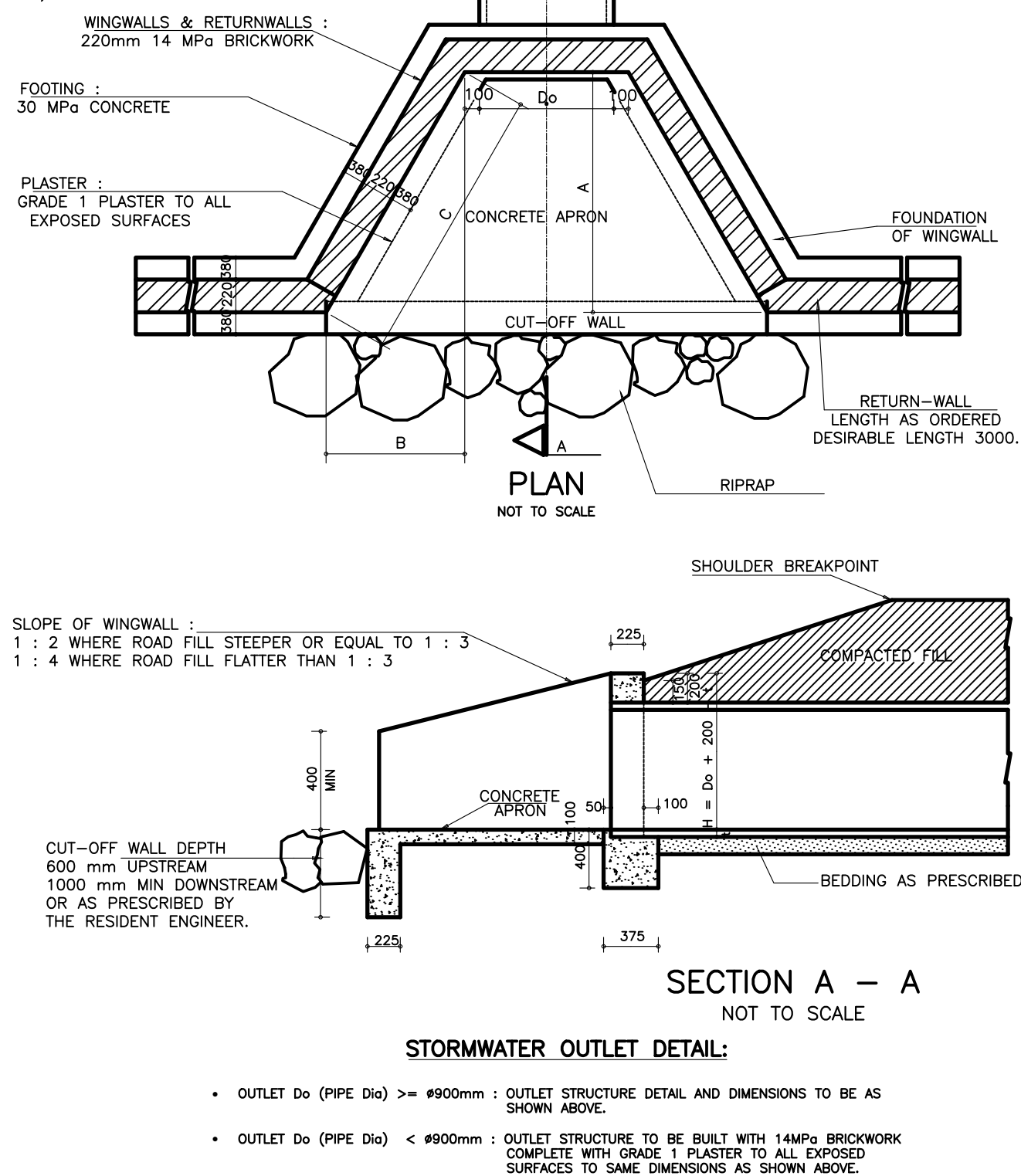
SKETCH :

ROAD CARRIAGEWAY

SW PIPE
150mm

x

SIDEWALK



- OUTLET Do (PIPE Dia) \geq \varnothing 900mm : OUTLET STRUCTURE DETAIL AND DIMENSIONS TO BE AS SHOWN ABOVE.
- OUTLET Do (PIPE Dia) $<$ \varnothing 900mm : OUTLET STRUCTURE TO BE BUILT WITH 14MPa BRICKWORK COMPLETE WITH GRADE 1 PLASTER TO ALL EXPOSED SURFACES TO SAME DIMENSIONS AS SHOWN ABOVE.

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ARCHITECT & PRINCIPAL AGENT



CIVIL & STRUCTURAL



MECHANICAL & ELECTRICAL



QUANTITY SURVEYOR



DESIGNED

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FOR BIDDING

TITLE: STORMWATER DETAILS

NUMBER: D0121/SD-02

SCALE ON A1: AS SHOWN

REVISION: A

[illegible]