



TENDER NO.: B/SM (28/27)

Construction of basic services (sewer, water networks including 30 waterborne precast toilets) at Enkanini Informal Settlements, Kayamandi.

PROCUREMENT DOCUMENT

NAME OF TENDERER:			
Total Bid Price (Inclusive of VAT) (refer to page 103 of 118):			
COMPLETION PERIOD IN WORKING DAYS	122 CALENDAR DAYS		
BBBEE LEVEL			
CLAIM POINTS FOR	LOCALITY	YES	NO

DATE: 31 OCTOBER 2026

PREPARED AND ISSUED BY:

Directorate: Finance:
Supply Chain Management Unit
Stellenbosch Municipality,
PO Box 17, Stellenbosch, 7599

**CONTACT FOR ENQUIRIES
REGARDING SPECIFICATIONS:**

Sugan Thavar
Pr. Tech Eng

Tel. Number: 031 468 6387
Email: dbn@vstce.co.za



1. TENDER NOTICE & INVITATION TO TENDER

BID NOTICE

STELLENBOSCH MUNICIPALITY HEREBY INVITES YOU TO TENDER FOR B/SM (28/27)

TENDER NUMBER: B/SM (28/27)

DESCRIPTION: CONSTRUCTION OF BASIC SERVICES (SEWER, WATER NETWORKS INCLUDING 30 WATERBORNE PRECAST TOILETS) AT ENKANINI INFORMAL SETTLEMENTS, KAYAMANDI.

CLOSING DATE: 30 November 2026

CLOSING TIME: 12h00: Bids will be opened in the Council Chambers or Supply Chain Management Boardroom.

CIDB: The following CIDB class of construction works will be applicable to the Tender, in accordance with the sum tendered or value determined in accordance with regulation 25(7A) of the Construction Industry Development Regulations, 2004 (as amended) – As of 23 May 2019 - Class of Construction Works: **CIDB grading of 4CE or higher is required**

INFORMATION:

Tender Specifications: Sugan Thavar at 031 468 6387 e- mail: dbn@vstce.co.za

Natasha Siyengele at 021 808 8465: e-mail: natasha.siyengele@ Stellenbosch.gov.za

SCM Requirements: Bulelwa Dolomba at 021 808 8521: email:

Bulelwa.dolomba@ Stellenbosch.gov.za

Office hours for collection: 08h00-15h30

A Compulsory Clarification Meeting via in person attendance Meeting will be held on **09 November 2026 @12pm, in Kayamandi Economic & Tourism Corridor, Enkanini GPS Co-ordinates 33°55'09.8"S 18°51'08.2"E. Tenderers who fail to attend the compulsory information session will be regarded as non-compliant. Tenderers who arrive late to the compulsory meeting will not be allowed to sign the attendance register and will be disqualified.**

Tenders may only be submitted on the Tender document issued by Stellenbosch Municipality and must be valid for **180 days** after tender closing. Late, electronic format, telephonic or faxed Tenders will not be considered and Stellenbosch Municipality does not bind itself to accept the lowest bid or any of the tenders that has been submitted.

Sealed Tenders, with “**B/SM 28/27 CONSTRUCTION OF BASIC SERVICES (SEWER, WATER NETWORKS INCLUDING 30 WATERBORNE PRECAST TOILETS) AT ENKANINI INFORMAL SETTLEMENTS, KAYAMANDI**” clearly endorsed on the envelope, must be deposited in the Tender box at the offices of the Stellenbosch Municipality, Town House Complex (Main Building between Town Hall and Municipal Library), Plein Street, Stellenbosch. The Tender box is accessible 24 hours a day and Tenders must be accompanied by the completed Tender documents. Tenders not accompanied by a complete Tender document, will not be considered.

NOTE: This tender will be evaluated in terms of the General Conditions of Contract (General, JBCC, FIDIC or CIDB), Supply Chain Management Policy and relevant specification as depicted in the document and also the Stellenbosch Preferential Procurement Policy effective from 16 January 2023 in accordance with the Preferential Procurement Regulations that was promulgated by the Minister of Finance on 04 November 2022 in Government Gazette No 47452.

The preferential points system applied is as follows: 80/20 in terms of the approved policy.

Price	80
B-BBEE status level of contribution	10
Locality	10
Total points for Price, B-BBEE and locality	100



The following conditions to Tender exist (failure to comply may result in your Tender being disqualified):

1. This Tender is subject to the general conditions of contract (General,) and special conditions for Tendering.
2. Relevant terms of reference.
3. Tenderers must be registered on the Central supplier database (CSD) if they wish to conduct business with the municipality.
4. No award will be made to tenderers whose tax status is non-compliant.
5. Tenders submitted must be in a sealed envelope clearly marked with the Tender number, placed in the tender box before closing time. Failure will result in the tender being invalid.

*Tender documents, in English, are available free of charge on the website: www.stellenbosch.gov.za. Alternatively, hard copies of the document are obtainable from the offices of the Supply Chain Management Unit, Stellenbosch Municipality, Town House Complex, 1st Floor, Plein Street, Stellenbosch, upon payment of a non-refundable fee of **R590.00 per document**.*

Note: The municipality will never contact you to pay money in exchange for the award of a tender.

G Mettler (Ms)
MUNICIPAL MANAGER



TENDER KENNISGEWING

STELLENBOSCH MUNISIPALITEIT NOOI U VIR DIE VOLGENDE TENDER: B/SM 28/27 : KONSTRUKSIE VAN BASIESE DIENSTE (RIOOL- EN WATERNETWERKE, INSLUITEND 30 VOORAFVERVAARDIGDE SPOELTOILETTE) BY ENKANINI INFORMELE NEDERSETTINGS, KAYAMANDI.

TENDER NOMMER: B/SM 28/27
BESKRYWING: KONSTRUKSIE VAN BASIESE DIENSTE (RIOOL- EN WATERNETWERKE, INSLUITEND 30 VOORAFVERVAARDIGDE SPOELTOILETTE) BY ENKANINI INFORMELE NEDERSETTINGS, KAYAMANDI

SLUITINGSDATUM: 30 November 2026

TYD VAN SLUITING: 12h00. Tenders sal oopgemaak word in die **Raadsaal** of in die **Voorsieningskanaalbestuurs Raadsaal**.

KIOR: Die volgende KIOR klas vir konstruksiewerk, in ooreenstemming met die totale bedrag getender of waarde bepaal in ooreenstemming met regulasie 25 (7A) van die Konstruksie-industrie Ontwikkelingsraad, Regulasies, 2004 (soos gewysig) op 23 Mei 2019, sal op die bod van toepassing wees. Tendersaars moet 'n **geskatte KIOR kontrakteurgradering** van ten minste **4CE** of hoër hê.

NAVRAE:

Tender spesifikasies: Sugan Thavar by Tel: 031 468 6387; e-pos: dbn@vstce.co.za

Natasha Siyengele by 021 808 8465: e-pos: natasha.siyengele@stellenbosch.gov.za

Vkb vereistes: Bulelwa Dolomba by 021 808 8521: e- pos: bulelwa.dolomba@stellenbosch.gov.za

Kantoor Ure: 08h00-15h30

'n **Verpligte terreinvergadering** word om **12:00 op 09 November 2026** by die **Kayamandi Ekonomiese en Toerisme Korridor, Enkanini (GPS Koördinate: 33°55'09.8"S 18°51'08.2"E)** gehou. Tendersaars wat versuim om die verpligte inligtingsessie by te woon, sal as nie-nakoming beskou word. Tendersaars wat laat by die verpligte vergadering opdaag, sal nie toegelaat word om die bywoningsregister te teken nie en sal gediskwalifiseer word.

Tenders mag slegs ingedien word op die tenderdokumentasie verskaf deur Stellenbosch Munisipaliteit en moet geldig wees vir 180 dae na die sluitingsdatum. Laat, elektroniese formaat of gefakse tenders sal nie aanvaar word nie en Stellenbosch Munisipaliteit is nie verplig om die laagste of enige tender wat ingedien word te aanvaar nie.

Verseëlde tenders duidelik gemerk: **"B/SM 28/27: KONSTRUKSIE VAN BASIESE DIENSTE (RIOOL- EN WATERNETWERKE, INSLUITEND 30 VOORAFVERVAARDIGDE SPOELTOILETTE) BY ENKANINI INFORMELE NEDERSETTINGS, KAYAMANDI"** op die koevert, moet geplaas word in tenderbus buite die kantore van Stellenbosch Munisipaliteit, Meenthuis Kompleks (Hoofgebou tussen Stadsaal en Munisipale Biblioteek), Pleinstraat, Stellenbosch. Die tenderbus is 24 uur per dag beskikbaar en tenders moet vergesel word met die voltooide stel tenderdokumente. Tendersaanbiedinge wat nie deur die volledige tenderdokument vergesel word nie, sal nie oorweeg word nie.

LET WEL: Hierdie tender sal geëvalueer word ingevolge die Algemene Kontrakvoorwaardes, JBCC, FIDIC of CIDB, Voorsieningskettingbestuursbeleid en relevante spesifikasies, soos vervat in die tender dokument asook die Stellenbosch **Voorkeurverkrygingsbeleid** **effektief vanaf 16 Januarie 2023 in samewerking met die Voorkeurverkrygingsregulasies wat op 04 November 2022 deur die Minister van Finansies in Staatskoerant No 47452 afgekondig is**

Die voorkeerpunte stelsel is soos volg gebaseer: 80/20 in terme van die goedgekeurde beleid:

Prys	80
B-BBSEB status	10
Ligging	10
Totale punte vir prys, B-BBSEB en ligging	100



Die volgende voorwaardes vir Tender soos volg: (versuim om te voldoen, kan veroorsaak dat u Tender gediskwalifiseer word):

1. Hierdie tender is onderworpe aan die algemene kontrakvoorwaardes (Algemeen) en spesiale tendervoorwaardes;
2. Toepaslike opdrag
3. Tenderaars moet geregistreer wees op Sentrale verskaffersdatabasis (SVD) as hulle met die munisipaliteit sake wil doen
4. Geen toekenning sal gemaak word aan diensverskaffers wie se Belasting status ongeldig is.
5. Die tender wat ingedien moet word, moet in 'n verseëlde koevert wees wat duidelik gemerk is met die Tondernommer, wat in die tenderbus voor sluitingstyd geplaas word. Versuim sal tot gevolg hê dat die tender ongeldig is.

*Tenderdokumente, in Engels, is verkrygbaar by die kantoor van die Voorsieningskanaalbestuurseenheid, Stellenbosch Munisipaliteit, Meenthuis Kompleks, 1ste Vloer, Pleinstraat, Stellenbosch na betaling van 'n nie-terugbetaalbare fooi van **R590.00 per harde kopie**. Alternatiewelik mag die dokument gratis afgelaai word vanaf die webblad www.stellenbosch.gov.za.*

Let wel: Die munisipaliteit sal jou nooit kontak om geld te betaal in ruil vir die toekenning van 'n tender nie.

G Mettler (Me)

MUNISIPALE BESTUURDER



**PART A
INVITATION TO BID**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE STELLENBOSCH MUNICIPALITY					
BID NUMBER:	B/SM 28/27	CLOSING DATE:	30 November 2026	CLOSING TIME:	12:00
DESCRIPTION	Construction of basic services (sewer, water networks including 30 waterborne precast toilets) at Enkanini Informal Settlements, Kayamandi.				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).					

BID RESPONSE DOCUMENTS MUST BE DEPOSITED IN THE BID BOX SITUATED AT **STELLENBOSCH MUNICIPALITY, TOWN HOUSE COMPLEX (MAIN BUILDING BETWEEN TOWN HALL AND MUNICIPAL LIBRARY), PLEIN STREET, STELLENBOSCH**

SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No	B-BBEE STATUS LEVEL SWORN AFFIDAVIT		☐ Yes ☐ No	
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
1. ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]		2. ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES, ANSWER PART B:3]	
3. TOTAL NUMBER OF ITEMS OFFERED			4. TOTAL BID PRICE	R	
5. SIGNATURE OF BIDDER			6. DATE		
7. NAME AND SURNAME OF RESPONSIBLE PERSON					
8. CAPACITY UNDER WHICH THIS BID IS SIGNED					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:			TECHNICAL INFORMATION MAY BE DIRECTED TO:		
DEPARTMENT	Supply Chain Management		CONTACT PERSON	Sugan Thavar	
CONTACT PERSON	Bulelwa Dolomba		TELEPHONE NUMBER	031 468 6387	
TELEPHONE NUMBER	021 808 8521		E-MAIL ADDRESS	rfq@vstce.co.za	
E-MAIL ADDRESS	Bulelwa.Dolomba@ Stellenbosch.gov.za				



PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED--(NOT TO BE RE-TYPED) OR SUBMITTED ONLINE**
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 16 January 2023, THE STELLENBOSCH SUPPLY CHAIN MANAGEMENT POLICY, THE GENERAL CONDITIONS OF CONTRACT (GCC, JBCC, FIDIC OR CIDB) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
- 2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.
- 2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

- 3.1. IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? ☐ YES ☐ NO
- 3.2. DOES THE ENTITY HAVE A BRANCH IN THE RSA? ☐ YES ☐ NO
- 3.3. DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? ☐ YES ☐ NO
- 3.4. DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? ☐ YES ☐ NO
- 3.5. IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? ☐ YES ☐ NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.
NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.

SIGNATURE OF BIDDER:

.....

CAPACITY UNDER WHICH THIS BID IS SIGNED:

.....

NAME AND SURNAME

.....

DATE

.....



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STELLENBOSCH
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PART A – ADMINISTRATIVE REQUIREMENTS IN TERMS OF THE SUPPLY CHAIN MANAGEMENT POLICY



2. CHECKLIST

PLEASE ENSURE THAT THE FOLLOWING FORMS HAVE BEEN DULY COMPLETED AND SIGNED AND THAT ALL DOCUMENTS AS REQUESTED, ARE ATTACHED TO THE TENDER DOCUMENT:

Certificate of Clarification Meeting Attendance - Is the form duly completed and signed by both tenderer and agent of the Stellenbosch Municipality?	Yes		No	
Authority to Sign a Bid - Is the form duly completed and is a certified copy of the resolution attached?	Yes		No	
MBD 4 (Declaration of Interest) - Is the form duly completed and signed?	Yes		No	
MBD 5 - Is the form duly completed and signed?	Yes		No	
MBD 6.1 (Preference Points claim form for purchases/services) - Is the form duly completed and signed? Is a copy of the B-BBEE Certificate issued by a Verification Agency accredited by SANAS or the original Sworn Affidavit attached? (NB! BBBEE CERTIFICATES CAN BE VERIFIED WITH THE VERIFICATION AGENCY BUT A SWORN AFFIDAVIT MUST BE AN ORIGINAL AND NOT A COPY TO BE ELIGIBLE FOR BBBEE POINTS)	Yes		No	
MBD 8 (Declaration of Past Supply Chain Practices) - Is the form duly completed and signed?	Yes		No	
MBD 9 (Certificate of Independent Bid Determination) - Is the form duly completed and signed?	Yes		No	
MBD 10 (Certificate of Payment of Municipal Accounts) - Is the form duly completed and signed? Are the Identity numbers, residential addresses and municipal account numbers of ALL members, partners, directors, etc. provided on the form as requested? (NB! MUNICIPAL ACCOUNTS WILL BE VERIFIED AND USED AS BASIS FOR PREFERENCE POINTS SCORING IN TERMS OF THE STELLENBOSCH PREFERENTIAL PROCUREMENT POLICY. THE BUSINESS ADDRESS, LEASE AGREEMENT OR SWORN AFFADAVIT WILL BE THE BASIS FOR AWARDING POINTS FOR LOCALITY)	Yes		No	
OHSA (Occupational Health and Safety) - Is the form duly completed and signed? Is a valid Letter of Good Standing from the Compensation Commissioner attached?	Yes		No	
Form of Indemnity - Is the form duly completed and signed?	Yes		No	
Pricing Schedule - Is the form duly completed and signed?	Yes		No	
Form of Offer - Is the form duly completed and signed? (If applicable)	Yes		No	
Declaration by Tenderer - Is the form duly completed and signed?	Yes		No	



3. CLARIFICATION MEETING CERTIFICATE

I / We*, the undersigned, certify that I / we* have examined the Site for the Works and its surroundings for which I / we* am / are* submitting this Tender and have, as far as practicable possible, familiarized myself / ourselves* with all information, risks, contingencies and other circumstances which may influence or affect my / our* tender.

NAME & SURNAME			
CAPACITY			
NAME OF FIRM			
ADDRESS			
TELEPHONE NO			
E-MAIL		SIGNATURE	

NB: Please note that no latecomers will be allowed.

*For all compulsory briefing sessions/site meetings/clarification meetings, bids received from interested bidders that did not attend the meeting or arrived later than predetermined date and time, will be **disqualified***



4. AUTHORITY TO SIGN A BID

1. SOLE PROPRIETOR (SINGLE OWNER BUSINESS) AND NATURAL PERSON

1.1. I, _____, the undersigned, hereby confirm that I am the sole owner of the business trading as _____.

OR

1.2. I, _____, the undersigned, hereby confirm that I am submitting this tender in my capacity as natural person.

SIGNATURE:		DATE:	
PRINT NAME:			
WITNESS 1:		WITNESS 2:	

OR

2. COMPANIES AND/OR CLOSE CORPORATIONS

- 2.1. If a Bidder is a **COMPANY**, a certified copy of the resolution by the board of directors, duly signed, authorising the person who signs this bid to do so, as well as to sign any contract resulting from this bid and any other documents and correspondence in connection with this bid and/or contract on behalf of the company **must be submitted with this bid**, that is, before the closing time and date of the bid
- 2.2. In the case of a **CLOSE CORPORATION (CC)** submitting a bid, a **resolution by its members**, authorizing a member or other official of the corporation to sign the documents on their behalf, **shall be included with the bid**.

PARTICULARS OF RESOLUTION BY BOARD OF DIRECTORS OF THE COMPANY/MEMBERS OF THE CC

Date Resolution was taken			
Resolution signed by (name and surname)			
Capacity			
Name and surname of delegated Authorised Signatory			
Capacity			
Specimen Signature			
Full name and surname of ALL Director(s) / Member (s)			
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	
Is a COPY of the resolution attached?		YES	NO
SIGNED ON BEHALF OF COMPANY / CC:		DATE:	
PRINT NAME:			
WITNESS 1:		WITNESS 2:	



OR

3. PARTNERSHIP

We, the undersigned partners in the business trading as _____ hereby authorize Mr/Ms _____ to sign this bid as well as any contract resulting from the bid and any other documents and correspondence in connection with this bid and /or contract for and on behalf of the abovementioned partnership.

The following particulars in respect of every partner must be furnished and signed by every partner:

Full name of partner			Signature
SIGNED ON BEHALF OF PARTNERSHIP:		DATE:	
PRINT NAME:			
WITNESS 1:		WITNESS 2:	

OR

4. CONSORTIUM

We, the undersigned consortium partners, hereby authorize _____ (Name of entity) to act as lead consortium partner and further authorize Mr./Ms. _____ To sign this offer as well as any contract resulting from this tender and any other documents and correspondence in connection with this tender and / or contract for and on behalf of the consortium.

The following particulars in respect of each consortium member must be provided and signed by each member:

Full Name of Consortium Member	Role of Consortium Member	% Participation	Signature
SIGNED ON BEHALF OF PARTNERSHIP:		DATE:	
PRINT NAME:			
WITNESS 1:		WITNESS 2:	



5. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This returnable schedule is to be completed by JOINT VENTURES

We, the undersigned, are submitting this tender offer in joint venture and hereby authorize Mr./Ms. _____

authorized signatory of the Company/Close Corporation/Partnership (name) _____

_____, acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

(i) Name of firm (Lead partner)			
Address			
		Tel. No.	
Signature		Designation	

(ii) Name of firm			
Address			
		Tel. No.	
Signature		Designation	

(iii) Name of firm			
Address:			
		Tel. No.	
Signature		Designation	

(iv) Name of firm			
Address			
		Tel. No.	
Signature		Designation	

NOTE: A copy of the Joint Venture Agreement showing clearly the percentage contribution of each partner to the Joint Venture, shall be appended to this Schedule.



6. STANDARD CONDITIONS OF TENDER (CIDB)

F.1 General

F.1.1 Actions

F.1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

F.1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict, and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

Note

- 1) *A conflict of interest may arise due to a conflict of roles, which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.*
- 2) *Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty, which would in any way, affect any decisions taken.*

F.1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

F.1.2 Tender Documents

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

F.1.3 Interpretation

F.1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

F.1.3.2 These conditions of tender, the tender data and tender schedules, which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

F.1.3.3 For the purposes of these conditions of tender, the following definitions apply:

- a) **conflict of interest** means any situation in which:
 - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
 - ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.
- b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;



-
- c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;
 - d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;
 - e) **organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body;
 - f) **functionality** means the measurement according to the predetermined norms of a service or commodity designed to be practical and useful, working or operating, taking into account quality, reliability, viability and durability of a service and technical capacity and ability of a tenderer.

F.1.4 Communication and employer's agent

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non- receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

F.1.5 Cancellation and Re-Invitation of Tenders

F1.5.1 An organ of state may, prior to the award of the tender, cancel a tender if-

- (a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or
- (b) funds are no longer available to cover the total envisaged expenditure; or
- (c) no acceptable tenders are received.

F1.5.2 The decision to cancel a tender must be published in the cidb website and in the government Tender Bulletin for the media in which the original tender invitation was advertised.

F.1.6 Procurement procedures

F.1.6.1 General

Unless otherwise stated in the tender data, a contract will, subject to F.3.13, be concluded with the tenderer who in terms of F.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.

F.1.6.2 Competitive negotiation procedure

F.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of F.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

F.1.6.2.2 All responsive tenderers, or not less than three responsive tenderers that are highest ranked in terms of the evaluation method and evaluation criteria stated in the tender data, shall be invited in each round to enter into competitive negotiations, based on the principle of equal treatment and keeping confidential the proposed solutions and associated information. Notwithstanding the provisions of F.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's



competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

F.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to make a fresh tender offer, based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

F.1.6.2.4 The contract shall be awarded in accordance with the provisions of F.3.11 and F.3.13 after tenderers have been requested to submit their best and final offer.

F.1.6.3 Proposal procedure using the two stage-system

F.1.6.3.1 Option 1

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

F.1.6.3.2 Option 2

F.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

F.1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

F.2 Tenderer's obligations

F.2.1 Obligations

F.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

F.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

F.2.2 Cost of tendering

F.2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

F.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

F.2.3 Check documents

Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.



F.2.4 Confidentiality and copyright of documents

Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

F.2.5 Reference documents

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

F.2.6 Acknowledge addenda

Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

F.2.7 Clarification meeting

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

F.2.8 Seek clarification

Request clarification of the tender documents, if necessary, by notifying the employer at least five working days before the closing time stated in the tender data.

F.2.9 Insurance

Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

F.2.10 Pricing the tender offer

F.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes (except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.

F.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

F.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

F.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

F.2.11 Alterations to documents

Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

F.2.12 Alternative tender offers

F.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.



F.2.12.2 Accept that an alternative tender offer may be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

F.2.12.3 An alternative tender offer may only be considered in the event that the main tender offer is the winning tender.

F.2.13 Submitting a tender offer

F.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

F.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

F.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

F.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

F.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

F.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

F.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.

F.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

F.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

F.2.14 Information and data to be completed in all respects

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.

F.2.15 Closing time

F.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

F.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.



F.2.16 Tender offer validity

- F.2.16.1** Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.
- F.2.16.2** If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.
- F.2.16.3** Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted.
- F.2.16.4** Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of F.2.13 with the packages clearly marked as "SUBSTITUTE".

F.2.17 Clarification of tender offer after submission

Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

***Note:** Sub-clause F.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.*

F.2.18 Provide other material

- F.2.18.1** Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.
- F.2.18.2** Dispose of samples of materials provided for evaluation by the employer, where required.

F.2.19 Inspections, tests and analysis

Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

F.2.20 Submit securities, bonds and policies

If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

F.2.21 Check final draft

Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

F.2.22 Return of other tender documents

If so instructed by the employer, return all retained tender documents within 28 days after the expiry of the validity period stated in the tender data.

F.2.23 Certificates

Include in the tender submission or provide the employer with any certificates as stated in the tender data.



F.3 The employer's undertakings

F.3.1 Respond to requests from the tenderer

F.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.

F.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

F.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who drew documents.

F.3.3 Return late tender offers

Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

F.3.4 Opening of tender submissions

F.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

F.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for its B-BBEE status level and time for completion for the main tender offer only.

F.3.4.3 Make available the record outlined in F.3.4.2 to all interested persons upon request.

F.3.5 Two-envelope system

F.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

F.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on B-BBEE status level.



Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

F.3.6 Non-disclosure

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

F.3.7 Grounds for rejection and disqualification

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

F.3.8 Test for responsiveness

F.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

F.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

F.3.9 Arithmetical errors, omissions and discrepancies

F.3.9.1 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or
- c) arithmetic errors in:
 - i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
 - ii) the summation of the prices.

F3.9.2 The employer must correct the arithmetical errors in the following manner:

- a) Where there is a discrepancy between the amounts in words and amounts in figures, the amount in words shall govern.
- b) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement



of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.

- c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of the arithmetical error in the manner described above.

F.3.10 Clarification of a tender offer

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

F.3.11 Evaluation of tender offers

F.3.11.1 General

Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate them using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

F.3.11.2 Method 1: Price and Preference

In the case of a price and preference:

- 1) Score tender evaluation points for price
- 2) Score points for preference
- 3) Add the points scored for price and preference

F.3.11.3 Method 2: Functionality, Price and Preference

In the case of a functionality, price and preference:

- 1) Score functionality, rejecting all tender offers that fail to achieve the minimum number of points for functionality as stated in the Tender Data.
- 2) No tender must be regarded as an acceptable tender if it fails to achieve the minimum qualifying score for functionality as indicated in the tender invitation.
- 3) Tenders that have received the minimum qualification score for functionality must be evaluated further in terms of the preference points system prescribed in paragraphs 4 and 5 below.

The 80/20 point system for acquisition of services, works or goods up to Rand value of R50 million.

The following formula must be used to calculate the points for price in respect of tender (including price quotation) with a rand value equal to, or above R30 000 and up to Rand value of R50 000 000 (all applicable taxes included):

$$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where:

P_s = Points scored for price of bid under consideration;

P_t = Price of bid under consideration; and

P_{min} = Price of lowest acceptable tender or offer.



- 1) (a)(1) A maximum of 20 points (80/20 preference points system) or 10 (90/10 preference points system), must be allocated for specific goals. These goals are :

- (i) contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender or disability;
- (ii) Promotion of enterprises located in the municipal area (WCO24)

- 2) Regarding par 1(a)(1)(i) at least 50% of the 20/10 points must be allocated to promote this goal and points will be allocated in terms of the BBBEE scorecard as follows.

B-BBEE Status Level of Contributor	Number of Points for 80/20 Preference Points System
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

- A tenderer must submit proof of its BBBEE status level contributor.
- A tenderer failing to submit proof of BBBEE status level of contributor may only score in terms of the 80/90-point formula for price; and scores 0 points out of 10/5 BBBEE status level of contributor, which is in line with section 2 (1) (d) (i) of the Act, where the supplier or service provider did not provide proof thereof.

- 3) Regarding par 1(a)(1)(ii) a maximum of 50% of the 20/10 points must be allocated to promote this goal. Maximum points will be allocated as follows.

Locality of supplier	Number of Points for 80/20 Preference Points System
Within the boundaries of the municipality	10
Outside of the boundaries of the municipality	0

The maximum will be proportionately adjusted depending on the number of points allocated for this goal. E.G., 40% will equate to 8/4 points.

- 4) An employer of state may apply the formula in paragraph (i) for price quotations with a value less than R30 000, if and when appropriate:
- 5) Subject to paragraph 4.3.8 of "Standard for Uniformity in Procurement, April 2017", the contract must be awarded to the tender who scores the highest total number of points.



F.3.11.6 Decimal places

Score price, preference and functionality, as relevant, to two decimal places.

F.3.11.7 Scoring Price

Score price of remaining responsive tender offers using the following formula:

$$N_{FO} = W_1 \times A$$

Where:

N_{FO} = the number of tender evaluation points awarded for price.

W_1 = the maximum possible number of tender evaluation points awarded for price as stated in the Tender Data.

A = a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.

Table F.1: Formulae for calculating the value of A

Formula	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a
1	Highest price or discount	$A = \left(1 + \frac{P - P_m}{P_m}\right)$	$A = P / P_m$
2	Lowest price or percentage commission / fee	$A = \left(1 - \frac{P - P_m}{P_m}\right)$	$A = P_m / P$
^a P_m = is the comparative offer of the most favourable comparative offer. P = is the comparative offer of the tender offer under consideration.			

F.3.11.8 Scoring preferences

Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where tenderers are not eligible for such preferences. Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.

F.3.11.9 Scoring functionality

Score each of the criteria and sub-criteria for quality in accordance with the provisions of the Tender Data.

Calculate the total number of tender evaluation points for quality using the following formula:

$$N_Q = W_2 \times S_O / M_S$$

Where:

S_O = the score for quality allocated to the submission under consideration;

M_S = the maximum possible score for quality in respect of a submission; and

W_2 = the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

F.3.12 Insurance provided by the employer

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

F.3.13 Acceptance of tender offer

Accept the tender offer; if in the opinion of the employer, it does not present any risk and only if the tenderer:



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- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
 - b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,
 - c) has the legal capacity to enter into the contract,
 - d) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
 - e) complies with the legal requirements, if any, stated in the tender data, and
 - f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

F.3.14 Prepare contract documents

F.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents, and
- c) other revisions agreed between the employer and the successful tenderer.

F.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

F.3.15 Complete adjudicator's contract

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

F.3.16 Notice to unsuccessful tenderers

F.3.16.1 Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period.

F.3.16.2 After the successful tenderer has been notified of the employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

F.3.17 Provide copies of the contracts

Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

F.3.18 Provide written reasons for actions taken

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender, but withhold information, which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

F.3.19 Transparency in the procurement process

F.3.19.1 The cidb prescripts require that tenders must be advertised and be registered on the cidb i-Tender system.



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- F3.19.2** The employer must adopt a transparency model that incorporates the disclosure and accountability as transparency requirements in the procurement process.
- F3.19.3** The transparency model must identify the criteria for selection of projects, project information template and the threshold value of the projects to be disclosed in the public domain at various intervals of delivery of infrastructure projects.
- F3.19.4** The client must publish the information on a quarterly basis, which contains the following information:
- Procurement planning process
 - Procurement method and evaluation process
 - Contract type
 - Contract status
 - Number of firms tendering
 - Cost estimate
 - Contract title
 - Contract firm(s)
 - Contract price
 - Contract scope of work
 - Contract start date and duration
 - Contract evaluation reports
- F3.19.5** The employer must establish a Consultative Forum which will conduct a random audit in the implementation of the transparency requirements in the procurement process.
- F3.19.6** Consultative Forum must be an independent structure from the bid committees. F3.19.7 The information must be published on the employer's website.
- F 3.19.8** Records of such disclosed information must be retained for audit purposes.



7. GENERAL CONDITIONS OF CONTRACT – GOVERNMENT PROCUREMENT

1. DEFINITIONS

The following terms shall be interpreted as indicated:

- 1.1. "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.
- 1.2. "Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.3. "Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
- 1.4. "Corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.
- 1.5. "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally
- 1.6. "Country of origin" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 1.7. "Day" means calendar day.
- 1.8. "Delivery" means delivery in compliance of the conditions of the contract or order.
- 1.9. "Delivery ex stock" means immediate delivery directly from stock actually on hand
- 1.10. "Delivery into consignees store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
- 1.11. "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.
- 1.12. "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable.
- 1.13. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.14. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.15. "GCC" means the General Conditions of Contract.
- 1.16. "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.17. "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
- 1.18. "Local content" means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.



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- 1.19. "Manufacture" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.20. "Order" means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.21. "Project site" where applicable, means the place indicated in bidding documents.
- 1.22. "Purchaser" means the organization purchasing the goods.
- 1.23. "Republic" means the Republic of South Africa.
- 1.24. "SCC" means the Special Conditions of Contract.
- 1.25. "Services" means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
- 1.26. "Supplier" means the successful bidder who is awarded the contract to maintain and administer the required and specified service(s) to the State.
- 1.27. "Tort" means in breach of contract.
- 1.28. "Turnkey" means a procurement process where one service provider assumes total responsibility for all aspects of the project and delivers the full end product / service required by the contract.
- 1.29. "Written" or "in writing" means handwritten in ink or any form of electronic or mechanical writing.

2. Application

- 2.1. These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2. Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.
- 2.3. Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

3. General

- 3.1. Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.
- 3.2. Invitations to bid are usually published in locally distributed news media and on the municipality / municipal entity website.

4. Standards

- 4.1. The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

5. Use of contract documents and information; inspection.

- 5.1. The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.
- 5.2. The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.
- 5.3. Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.



- 5.4. The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

6. Patent rights

- 6.1. The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.
- 6.2. When a supplier developed documentation / projects for the municipality / municipal entity, the intellectual, copy and patent rights or ownership of such documents or projects will vest in the municipality / municipal entity.

7. Performance security

- 7.1. Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.
- 7.2. The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.
- 7.3. The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:
- 7.3.1. bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
 - 7.3.2. a cashier's or certified cheque
- 7.4. The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified.

8. Inspections, tests and analyses

- 8.1. All pre-bidding testing will be for the account of the bidder. If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspections tests and analysis, the bidder or contractor's premises shall be open, at all reasonable hours, for inspection by a representative of the purchaser or an organization acting on behalf of the purchaser.
- 8.2. If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.
- 8.3. If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the goods to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
- 8.4. Where the goods or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such goods or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
- 8.5. Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.



8.6. Any contract goods may on or after delivery be inspected, tested or analyzed and may be rejected if found not to comply with the requirements of the contract. Such rejected goods shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with goods which do comply with the requirements of the contract. Failing such removal the rejected goods shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute goods forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected goods, purchase such goods as may be necessary at the expense of the supplier.

8.7. The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 22 of GCC.

9. Packing

9.1. The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2. The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, and in any subsequent instructions ordered by the purchaser.

10. Delivery

Delivery of the goods shall be made by the supplier in accordance with the documents and terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified.

11. Insurance

The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified.

12. Transportation

Should a price other than an all-inclusive delivered price be required, this shall be specified.

13. Incidental

13.1. The supplier may be required to provide any or all of the following services, including additional services, if any:

13.1.1. performance or supervision of on-site assembly and/or commissioning of the supplied goods;

13.1.2. furnishing of tools required for assembly and/or maintenance of the supplied goods;

13.1.3. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;

13.1.4. performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and

13.1.5. training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.

13.2. Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.



14. Spare parts

14.1. As specified, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:

14.1.1. such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and;

14.1.2. in the event of termination of production of the spare parts:

14.1.2.1. advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and

14.1.2.2. following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

15.1. The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.

15.2. This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.

15.3. The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.

15.4. Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.

15.5. If the supplier, having been notified, fails to remedy the defect(s) within the period specified, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

16. Payment

16.1. The method and conditions of payment to be made to the supplier under this contract shall be specified.

16.2. The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfillment of other obligations stipulated in the contract.

16.3. Payments shall be made by the purchaser **no later than thirty (30) days** after submission of an **invoice, statement** or claim by the supplier.

16.4. Payment will be made in Rand unless otherwise stipulated.

17. Prices

Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized or in the purchaser's request for bid validity extension, as the case may be.

18. Variation orders

In cases where the estimated value of the envisaged changes in purchase does not vary more than 15% of the total value of the original contract, the contractor may be instructed to deliver the goods or render the services as such. In cases of measurable quantities, the contractor may be approached to reduce the unit price and such offers, may be accepted provided that there is no escalation in price.



19. Assignment

The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

20. Subcontracts

The supplier shall notify the purchaser in writing of all subcontracts awarded under this contract, if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

21. Delays in the supplier's performance

21.1. Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.

21.2. If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.

21.3. The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.

21.4. Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 22 without the application of penalties.

21.5. Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

22. Penalties

Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

23. Termination for default

23.1. The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:

23.1.1. if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;

23.1.2. if the Supplier fails to perform any other obligation(s) under the contract; or

23.1.3. if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

23.2. In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.



- 23.3. Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.
- 23.4. If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the supplier as having no objection and proceed with the restriction.
- 23.5. Any restriction imposed on any person by the purchaser will, at the discretion of the purchaser, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the purchase actively associated.
- 23.6. If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:
- 23.6.1. the name and address of the supplier and / or person restricted by the purchaser;
 - 23.6.2. the date of commencement of the restriction
 - 23.6.3. the period of restriction; and
 - 23.6.4. the reasons for the restriction.
- These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.
- 23.7. If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.

24. Anti-dumping and countervailing duties and rights

When, after the date of bid, provisional payments are required, or antidumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to the State or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him.

25. Force Majeure

- 25.1. Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.
- 25.2. If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.



26. Termination for insolvency

The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

27. Settlement of Disputes

27.1. If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

27.2. If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.

27.3. Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.

27.4. Notwithstanding any reference to mediation and/or court proceedings herein,

27.4.1. the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and

27.4.2. the purchaser shall pay the supplier any monies due for goods delivered and / or services rendered according to the prescripts of the contract.

28. Limitation of liability

28.1. Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6;

28.1.1. the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and

28.1.2. the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment

29. Governing language

The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.

30. Applicable law

The contract shall be interpreted in accordance with South African laws, unless otherwise specified.

31. Notices

31.1. Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice

31.2. The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

32. Taxes and duties

32.1. A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.

32.2. A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.



32.3. No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid SARS must have certified that the tax matters of the preferred bidder are in order.

32.4. No contract shall be concluded with any bidder whose municipal rates and taxes and municipal services charges are in arrears.

33. Transfer of contracts

The contractor shall not abandon, transfer, cede, assign or sublet a contract or part thereof without the written permission of the purchaser.

34. Amendment of contracts

No agreement to amend or vary a contract or order or the conditions, stipulations or provisions thereof shall be valid and of any force unless such agreement to amend or vary is entered into in writing and signed by the contracting parties. Any waiver of the requirement that the agreement to amend or vary shall be in writing, shall also be in writing.

35. Prohibition of restrictive practices.

35.1. In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder(s) is / are or a contractor(s) was / were involved in collusive bidding.

35.2. If a bidder(s) or contractor(s) based on reasonable grounds or evidence obtained by the purchaser has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in section 59 of the Competition Act No 89 Of 1998.

35.3. If a bidder(s) or contractor(s) has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.

General Conditions of Contract (revised July 2015)



8. GENERAL CONDITIONS OF TENDER

1. Sealed tenders, with the “**Tender Number and Title**” clearly endorsed on the envelope, must be deposited in the **tender box** at the offices of the Stellenbosch Municipality, Plein Street, Stellenbosch.
2. The tender must be lodged by the Tenderer in the tender box in the Main Hall Entrance, Stellenbosch Municipal Offices, Plein Street, Stellenbosch

PLEASE NOTE:

- 2.1. Tenders that are deposited in the incorrect box will not be considered.
 - 2.2. Mailed, telegraphic or faxed tenders will not be accepted.
 - 2.3. Documents may only be completed in non-erasable ink.
 - 2.4. The use of correction fluid/tape is not allowed.
 - 2.4.1. In the event of a mistake having been made, it shall be crossed out in ink and be accompanied by an initial at each and every alteration.
 - 2.4.2. Alterations or deletions not signed by the Tenderer may render the tender invalid.
 - 2.5. All bids must be submitted in writing on the official forms supplied (not to be re-typed)
 - 2.6. All prices shall be quoted in South African currency and be **INCLUSIVE of VAT**.
- 3. Where the value of an intended contract (or company turnover) will exceed R1 000 000, 00 (R1 million) it is the bidder's responsibility to be registered with the South African Revenue Service (SARS) for VAT purposes in order to be able to issue tax invoices. The municipality will deem the price above R 1 000 000,00 (R1 million) to be VAT inclusive even if it is indicated that no VAT is charged. Please ensure that provision is made for VAT in these instances. The TOTAL price tendered will remain fixed.**
- 3.1 It is a requirement of this contract that the amount of value-added tax (VAT) must be shown clearly on each invoice.
 - 3.2 The amended Value-Added Tax Act requires that a Tax Invoice for supplies in excess of R3 000 should, in addition to the other required information, also disclose the VAT registration number of the recipient, with effect from 1 March 2005. The VAT registration number of the Stellenbosch Municipality is **4700102181**.
- 3 Any Tender received after the appointed time for the closing of Tenders shall not be considered but shall be filed unopened with the other Tenders received or may be returned to the Tenderer at his request.
 - 4 Tenders may not be telefaxed to the Municipality and therefore any tenders received by fax will **not** be considered.
 - 5 Tenders shall be opened in public at the Stellenbosch Municipal Offices as soon as possible after the closing time for the receipt of tenders.
 - 6 The Municipality shall have the right to summarily disqualify any Tenderer who, either at the date of submission of this tender or at the date of its award, is indebted to the Municipality in respect of any rental, levies, rates and/or service charges; **ALTERNATIVELY**;
 - 6.1 That an agreement be signed whereby the Tenderer agrees that a percentage or fixed amount at the discretion of the Municipality, be deducted from payments due to him for this tender, until the debt is paid in full.
 - 6.2 The tenderer shall declare **all** the Municipal account numbers in the Stellenbosch Area for which the enterprise or the proprietors or directors in their personal capacity is/ are responsible or co-responsible.



7. Negotiations for a fair market related price

7.1 The award of the tender may be subject to price negotiation with the preferred tenderers.

8 This bid will be evaluated and adjudicated according to the following criteria:

- 8.1 Relevant specifications
- 8.2 Value for money
- 8.3 Capability to execute the contract
- 8.4 PPPFA & associated regulations

9 Service Level Agreement

The award of the tender is subject to the signing of a Service Level Agreement (SLA) between the successful bidder and Stellenbosch Municipality.

10 Inclusion as a standard clause in the tender specification documents where any asset is constructed (delete which ever is not applicable)

On practical completion date, a report or certificate should be issued indicating the total costs of the project attributable to each significant component as identified within the lowest asset hierarchy level (4) as specified within the infrastructure catalogue or Annexure A of the Stellenbosch Municipality's asset management policy as approved in 2014, if not contained in the catalogue.

Inclusion in contract with consultants

If construction is still in progress over the year-end period of the Stellenbosch Municipality, being 30 June of each year, the Municipality should be furnished with a report / certificate at year-end (30 June), which details (a) The cumulative expenditure incurred up to 30 June for the project. (b) any details if the project is taking a significant longer period of time to complete than expected, including reasons for any delays. (c) details where construction or development has been halted either during the current or previous reporting period(s), including reasons for halting the construction or development of the asset/project.

11 Centralised Supplier Database

No Bids will be awarded to a bidder who is not registered on the Centralised Supplier Database (CSD).

The CSD supplier number starting with (MAAA) number is automatically generated by the Central Database System after successful registration and validation of a prospective service provider. This number is now a mandatory requirement, as referred to in regulation 14(1) (b) of the Municipal Supply Chain Management Regulations, as part of the listing criteria for accrediting a prospective service provider. Prospective suppliers should self – register on the CSD website at www.csd.gov.za Registration on the CSD will be compulsory in order to conduct business with the STELLENBOSCH MUNICIPALITY. Assistance with CSD Registration can be provided by contacting 021 808 8594 or Nicolene.Hamilton@stellenbosch.gov.za

Centralised Supplier Database No. MAAA.....



9. SPECIAL CONDITIONS OF CONTRACT

Settlement of Disputes

Should the parties fail to resolve any dispute by way of mutual consultation, either party shall be entitled to refer the matter for mediation. Such referral shall be done by either party giving written notice to the other of its intention to commence with mediation. No mediation may be commenced unless such notice is given to the other party.

Irrespective whether the mediation resolves the dispute, the parties shall bear their own costs concerning the mediation and share the costs of the mediator and related costs equally.

Where the parties reach settlement of the dispute or any part thereof, the mediator shall record such agreement and on signing thereof by the parties the agreement shall be final and binding.

Save for reference to any portion of any settlement or decision which has been agreed to be final and binding on the parties, no reference shall be made by or on behalf of either party in any subsequent court proceedings, to any outcome of an amicable settlement by mutual consultation, or the fact that any particular evidence was given, or to any submission, statement or admission made in the course of amicable settlement by mutual consultation or mediation.

If the parties cannot reach an agreement, the Mediator must refer the matter to Arbitration.

Arbitration

Arbitrator will be appointed by mutual agreement as per the provisions of the Arbitration Act of 1965 as amended, nominated from the Association of Arbitrators (Southern Africa).

The Arbitrator must be a legal practitioner with more than 10 years legal experience. Must have a good knowledge of the Municipal Finance Management Act and other relevant Municipal Legislation and may in addition be qualified in respect of the main nature of the Contract (Engineer, Quantity Surveyor, Accountant, etc.).

The Arbitrator shall hear arguments both in writing and oral representations and parties shall have the right to contend the position of the other party and shall have the right to defend its own position.

The ruling of the Arbitrator shall be executed, but the matter may thereafter be defended in court if parties still do not agree.

Performance Guarantee

In terms of GCC Clauses 6.2.1 and 6.2.2, the Contractor shall deliver to the Employer, within 14 days of receiving the Letter of Acceptance, a Fixed Performance Guarantee equal to 5% of the Contract Sum (inclusive of VAT), in the prescribed form.

Defects Liability Period

Notwithstanding GCC Clause 15, the Defects Liability Period for all civil, structural, and plumbing works executed under this contract shall be 12 months, commencing on the date of issue of the Certificate of Practical Completion.

Retention

In terms of GCC Clause 6.11.1.1, retention shall be deducted at 10% of the value of work certified in each interim payment certificate (excluding VAT) until the Retention Limit of 5% of the Contract Sum (excluding VAT). Fifty per cent of the retention money held shall be released upon issue of



the Certificate of Completion, and the balance shall be released within 14 days after expiration of the Defects Liability Period.

Extension of Time due to Abnormal Rainfall (Rainy Days)

Extension of time will only be considered for abnormal rainfall. The Contractor must keep a daily record of rainfall on site. Claims for extension of time due to rain delays will be evaluated using the standard SAICE General Conditions of Contract (2015) formula, comparing actual recorded rainfall days against historical averages for the region. Delays must impact the critical path of the approved construction program to qualify for an extension.



10. MBD 4 – DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid:

3.1.	Full Name of bidder or his or her representative										
3.2.	Identity Number										
3.3.	Position occupied in the Company (director, shareholder ² etc.)										
3.4.	Company Registration Number										
3.5.	Tax Reference Number										
3.6.	VAT Registration Number										

3.7.	Are you presently in the service of the state?	YES		NO	
3.7.1.	If so, furnish particulars:				

3.8.	Have you been in the service of the state for the past twelve months?	YES		NO	
3.8.1.	If so, furnish particulars:				

¹ MSCM Regulations: "in the service of the state" means to be –

- a. a member of –
 - i. any municipal council;
 - ii. any provincial legislature; or
 - iii. the National Assembly or the National Council of Provinces;
- b. a member of the board of directors of any municipal entity;
- c. an official of any municipality or municipal entity;
- d. an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
- e. an executive member of the accounting authority of any national or provincial public entity; or
- f. an employee of Parliament or a provincial legislature.

² "Shareholder" means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.



3.9.	Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?	YES		NO	
3.9.1.	If so, furnish particulars:				
3.10.	Are you aware of any relationship (family, friend, other) between a bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid?	YES		NO	
3.10.1.	If so, furnish particulars:				
3.11.	Are any of the company's directors, managers, principal shareholders or stakeholders in the service of the state?	YES		NO	
3.11.1.	If so, furnish particulars:				
3.12.	Is any spouse, child or parent of the company's directors, managers, principal shareholders or stakeholders in the service of the state?	YES		NO	
3.12.1.	If so, furnish particulars:				
3.13.	Do you or any of the directors, trustees, managers, principal shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract?	YES		NO	
3.13.1.	If so, furnish particulars:				



3.14.	Please provide the following information on ALL directors/shareholders/trustees/members below:		
Full Name and Surname	Identity Number	Personal Income Tax Number	Provide State ³ Employee Number

NB: a) PLEASE ATTACH CERTIFIED COPY(IES) OF ID DOCUMENT(S) b) PLEASE PROVIDE PERSONAL INCOME TAX NUMBERS FOR ALL DIRECTORS / SHAREHOLDERS / TRUSTEES / MEMBERS, ETC.

4. DECLARATION

I, the undersigned (name) _____, certify that the information furnished in paragraph 3 above is correct.

I accept that the state may act against me should this declaration prove to be false.

SIGNATURE		DATE	
NAME OF SIGNATORY			
POSITION			
NAME OF COMPANY			

³ MSCM Regulations: "in the service of the state" means to be –

- a. a member of –
 - i. any municipal council;
 - ii. any provincial legislature; or
 - iii. the National Assembly or the National Council of Provinces;
- b. a member of the board of directors of any municipal entity;
- c. an official of any municipality or municipal entity;
- d. an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- e. an executive member of the accounting authority of any national or provincial public entity; or
- f. an employee of Parliament or a provincial legislature.



11. MBD6.1 – PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 – PURCHASES/SERVICES 80/20

NB:

Before completing this form, bidders must study the general conditions, definitions and directives applicable in respect of B-BBEE, as prescribed in the Preferential Procurement Regulations, 16 January 2023 and the Stellenbosch Preferential Procurement Policy 2026/2027

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution and any other applicable preference

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2

- a) The value of this bid is estimated to **not exceed** R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable; or

1.3 Points for this bid shall be awarded for:

- (a) Price;
- (b) B-BBEE Status Level of Contributor. and
- (c) Locality of supplier

1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTOR	10
LOCALITY	10
Total points for Price, BBBEE and Locality (must not exceed 100)	100

1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6 Failure on the part of a bidder to submit proof of Locality together with the bid, will be interpreted to mean that preference points for Locality are not claimed.

1.7 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at



any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (d) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) **“functionality”** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) **“Locality”** means the local suppliers and/or service providers that business offices are within the Municipal area of Stellenbosch (WC024).
- (h) **“price”** includes all applicable taxes less all unconditional discounts;
- (i) **“proof of B-BBEE status level of contributor”** means:
 - 1) B-BBEE Status level certificate issued by an authorized body or person;
 - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
 - 3) Any other requirement prescribed in terms of the B-BBEE Act;
- (j) **“QSE”** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (k) **“Specific goals”** means specific goals as contemplated in section 2(1)(d) of the Act which may include contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender and disability including the implementation of programmes of the Reconstruction and Development Programme as published in Government Gazette No. 16085 dated 23 November 1994;
- (l) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;



3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

4. POINTS AWARDED FOR PRICE

4.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

80/20

$$Ps = 80 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right)$$

Where

- Ps = Points scored for price of bid under consideration
 Pt = Price of bid under consideration
 Pmin = Price of lowest acceptable bid

4.2 FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME-GENERATING PROCUREMENT

4.3 POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

80/20

$$Ps = 80 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)$$

Where

- Ps = Points scored for price of bid under consideration
 Pt = Price of bid under consideration
 Pmax = Price of highest acceptable bid

5. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

- 5.1 In terms of Regulation 4 (2) and 5 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining a specific goal specified for the tender
- 5.2 The tendering conditions will stipulate the specific goals, as contemplated in section 2(1)(d)(ii) of the Preferential Procurement Act, be attained.
- 5.3 A maximum of 20 points (80/20 preference points system) or 10 (90/10) preference points system), must be allocated for specific goals. These goals are :
- (a) contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender or disability;
 - (b) Promotion of enterprises located in the municipal area (WCO24)



- 5.4 Regarding par 5.3 (a) at least 50% of the 20/10 points must be allocated to promote this goal and points will be allocated in terms of the BBBEE scorecard as follows.

B-BBEE Status Level of Contributor	Number of Points for 80/20 Preference Points System
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

- 5.5 A tenderer must submit proof of its BBBEE status level contributor.
- 5.6 A tenderer failing to submit proof of BBBEE status level of contributor –
- 5.6.1 may only score in terms of the 80/90-point formula for price; and
- 5.6.2 scores 0 points out of 10/5 BBBEE status level of contributor, which is in line with section 2 (1) (d) (i) of the Act, where the supplier or service provider did not provide proof thereof.
- 5.7 Regarding par 5.3 (b) a maximum of 50% of the 20/10 points must be allocated to promote this goal. Maximum points will be allocated as follows.

Locality of supplier	Number of Points for 80/20 Preference Points System
Within the boundaries of the municipality	10
Outside of the boundaries of the municipality	0



6. BID DECLARATION

6.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution and/or Locality must complete the following:

7. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

7.1 B-BBEE Status Level of Contributor: . =(maximum of 10 or 20 points)
 (Points claimed in respect of paragraph 7.1 must be substantiated by relevant proof of B-BBEE status level of contributor.)

7.2 Within the boundaries of Stellenbosch Municipality (WC024)?

YES	☐	NO	☐
-----	--------------------------	----	--------------------------

Business Address -

(Points claimed in respect of paragraph 7.2 must be substantiated by relevant proof that the business premises is situated in the Municipal area of Stellenbosch (WC024). A valid municipal account or proof of valid lease agreement, or sworn affidavit must be attached)

8. SUB-CONTRACTING

8.1 Will any portion of the contract be sub-contracted?

(**Tick applicable box**)

YES	☐	NO	☐
-----	--------------------------	----	--------------------------

8.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE

(**Tick applicable box**)

YES	☐	NO	☐
-----	--------------------------	----	--------------------------

v) Specify, by ticking the appropriate box, if subcontracting with an enterprise

Designated Group: An EME or QSE which is at last 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		



Black people who are military veterans		
OR		
Any EME		
Any QSE		

9. DECLARATION WITH REGARD TO COMPANY/FIRM

9.1 Name of company/firm:.....

9.2 VAT registration number:.....

9.3 Company registration number:.....

9.4 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company
- ☐ (Pty) Limited
- [TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

.....

.....

9.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional service provider
- ☐ Other service providers, e.g. transporter, etc.
- [TICK APPLICABLE BOX]

9.7 MUNICIPAL INFORMATION

Municipality where business is situated:

Registered Account Number:

Stand Number:.....

9.8 Total number of years the company/firm has been in business:.....

9.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as



indicated in paragraph 1 of this form;

- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor/Locality points has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
 - (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution.

SIGNATURE OF BIDDER(S):			
WITNESS 1:		WITNESS 2:	
DATE:			
ADDRESS:			



PLEASE COMPLETE IN FULL YOUR OWN AFFIDAVIT TO CLAIM POINTS

SWORN AFFIDAVIT – B-BBEE EXEMPTED MICRO ENTERPRISE – GENERAL (DRAFT EXAMPLE)
(DO NOT USE. USE NEW/APPLICABLE TEMPLATE)

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a Member / Director / Owner (**Select one**) of the following enterprise and am duly authorised to act on its behalf: **NB!**

Enterprise Name:	
Trading Name (If Applicable):	
Registration Number:	
Vat Number (If applicable)	
Enterprise Physical Address:	
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):	
Nature of Business:	
Definition of "Black People"	<p>As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians –</p> <p>(a) who are citizens of the Republic of South Africa by birth or descent; or</p> <p>(b) who became citizens of the Republic of South Africa by naturalisation-</p> <p>i. before 27 April 1994; or</p> <p>ii. on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date;"</p>



Definition of “Black Designated Groups”	<p>“Black Designated Groups means:</p> <ul style="list-style-type: none"> (a) unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution; (b) Black people who are youth as defined in the National Youth Commission Act of 1996; (c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; (d) Black people living in rural and under developed areas; (e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;”
--	---



3. I hereby declare under Oath that:

- The Enterprise is _____% Black Owned using the flow-through principle as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise is _____% Black Female Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise is _____% Black Designated Group Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- Black Designated Group Owned % Breakdown as per the definition stated above:
 - Black Youth % = _____%
 - Black Disabled % = _____%
 - Black Unemployed % = _____%
 - Black People living in Rural areas % = _____%
 - Black Military Veterans % = _____%
- Based on the Audited Financial Statements/Financial Statements and other information available on the latest financial year-end of _____ (DD/MM/YYYY), the annual Total Revenue was R10,000,000.00 (Ten Million Rands) or less
- Please Confirm on the below table the B-BBEE Level Contributor, **by ticking the applicable box.**

NB!

100% Black Owned	Level One (135% B-BBEE procurement recognition level)	
At least 51% Black Owned	Level Two (125% B-BBEE procurement recognition level)	
Less than 51% Black Owned	Level Four (100% B-BBEE procurement recognition level)	

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the Owners of the Enterprise which I represent in this matter.
5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Deponent Signature: _____

Date : _____

NB! ORIGINALLY CERTIFIED/ NOT COPY

Commissioner of Oaths

Signature & stamp

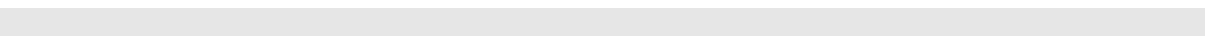
Date:



EXAMPLE OF POINT SCORING AND ALLOCATION OF PREFERENCE POINTS (80/20) WHERE LOCALITY AS A GOAL IS INCLUDED. STELLENBOSCH PREFERENTIAL PROCUREMENT POLICY.

BIDDER	PRICE	BBBEE LEVEL (VALID)	BUSINESS PREMISES (IN WC024)
TENDERER A	R 80 000	1	NO
TENDERER B	R 75 000	1	YES
TENDERER C	R 70 000	2	NO

BIDDER	PRICE POINTS (Out of 80)	BBBEE POINTS (Out of 10)	LOCALITY POINTS (Out of 10)	TOTAL POINTS (Out of 100)
TENDERER A	68.57	10	0	78.57
TENDERER B	74.29	10	10	94.29
TENDERER C	80	9	0	89



12. MBD 8 – DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1. This Municipal Bidding Document must form part of all bids invited.
2. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
3. The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - 3.1. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - 3.2. been convicted for fraud or corruption during the past five years;
 - 3.3. willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - 3.4. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
4. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

4.1	Is the bidder or any of its directors listed on the National Treasury's database as a company or person prohibited from doing business with the public sector? <i>(Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the audi alteram partem rule was applied).</i>	Yes	No
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? <i>(To access this Register enter the National Treasury's website, www.treasury.gov.za, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445).</i>	Yes	No
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes	No



4.3.1	If so, furnish particulars:		
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes	No
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes	No
4.5.1	If so, furnish particulars:		

5. CERTIFICATION

I, the undersigned (full name), _____, certify that the information furnished on this declaration form true and correct.

I accept that, in addition to cancellation of a contract, action may be taken against me should this declaration prove to be false.

SIGNATURE:		NAME (PRINT):	
CAPACITY:		DATE:	
NAME OF FIRM:			



13. MBD 9 – CERTIFICATE OF INDEPENDENT BID DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all bids invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).⁴ Collusive bidding is a *per se* prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - 3.1. take all reasonable steps to prevent such abuse;
 - 3.2. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - 3.3. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

CERTIFICATE OF INDEPENDENT BID DETERMINATION:

In response to the invitation for the bid made by:

STELLENBOSCH MUNICIPALITY

I, the undersigned, in submitting the accompanying bid, hereby make the following statements that I certify to be true and complete in every respect:

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:

⁴ Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.



- 5.1. has been requested to submit a bid in response to this bid invitation;
 - 5.2. could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - 5.3. provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium⁵ will not be construed as collusive bidding.
 7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - 7.1. prices;
 - 7.2. geographical area where product or service will be rendered (market allocation)
 - 7.3. methods, factors or formulas used to calculate prices;
 - 7.4. the intention or decision to submit or not to submit, a bid;
 - 7.5. the submission of a bid which does not meet the specifications and conditions of the bid; or
 - 7.6. bidding with the intention not to win the bid.
 8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
 9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
 10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

SIGNATURE:		NAME (PRINT):	
CAPACITY:		DATE:	
NAME OF FIRM:			

⁵ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.



14. MBD 10 – CERTIFICATE FOR PAYMENT OF MUNICIPAL SERVICES

DECLARATION IN TERMS OF CLAUSE 112(1) OF THE MUNICIPAL FINANCE MANAGEMENT ACT (NO.56 OF 2003)

I, _____, _____ (full name and ID no.), hereby acknowledge that according to SCM Regulation 38(1)(d)(i), the Municipality may reject the tender of the tenderer if any municipal rates and taxes or municipal service charges owed by the Tenderer or any of its directors/members/partners to the Stellenbosch Municipality, or to any other municipality or municipal entity, are in arrears for more than 3 (three) months.

I declare that I am duly authorised to act on behalf of _____ (name of the firm) and hereby declare, that to the best of my personal knowledge, neither the firm nor any director/member/partner of said firm is in arrears on any of its municipal accounts with any municipality in the Republic of South Africa, for a period longer than 3 (three) months.

I further hereby certify that the information set out in this schedule and/or attachment(s) hereto is true and correct. The Tenderer acknowledges that failure to properly and truthfully complete this schedule may result in the tender being disqualified, and/or in the event that the tenderer is successful, the cancellation of the contract.

PHYSICAL BUSINESS ADDRESS(ES) OF THE TENDERER	MUNICIPAL ACCOUNT NUMBER

FURTHER DETAILS OF THE BIDDER'S Director / Shareholder / Partners, etc.:

Director / Shareholder / partner	Physical address of the Business	Municipal Account number(s)	Physical residential address of the Director / shareholder / partner	Municipal Account number(s)

NB: Please attach certified copy (ies) of ID document(s) and Municipal Accounts If the entity or any of its Directors/Shareholders/Partners, etc. rents/leases premises, a copy of the rental/lease agreement or sworn affidavit must be submitted with this tender.

- PLEASE SUBMIT MUNICIPAL ACCOUNTS FOR THE FOLLOWING TWO MONTHS AFTER BID CLOSURE TO THE RELEVANT SCM PRACTITIONER SHOULD THE BID NOT BE AWARDED YET.

Signature	Position	Date



15. COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT, 1993 (ACT 130 OF 1993)

COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT, 1993 (ACT 130 OF 1993)

Stellenbosch Municipality has legal duty in terms of Section 89 of the said Act to ensure that all contractors with whom agreements are entered into for the execution of work are registered as employers in accordance with the provisions of this Act and that all the necessary assessments have been paid by the contractor.

In order to enter into this agreement, the following information is needed regarding the above-mentioned:

Contractor's registration number with the office of the Compensation Commissioner:

NOTE:

A copy of the latest receipt together with a copy of the relevant assessment OR a copy of a valid Letter of Good Standing must be handed in, in this regard.

PRINT NAME:			
CAPACITY:		Name of firm	
SIGNATURE:		DATE:	



16. FORM OF INDEMNITY

INDEMNITY

Given by (Name of Company) _____
of (registered address of Company) _____
a company incorporated with limited liability according to the Company Laws of the Republic of South Africa (hereinafter called the Contractor), represented herein by (Name of Representative) _____
_____ in his capacity as (Designation) _____
of the Contractor, is duly authorised hereto by a resolution dated _____ /20____,
to sign on behalf of the Contractor.

WHEREAS the Contractor has entered into a Contract dated _____ / 20____,
with the Municipality who require this indemnity from the Contractor.

NOW THEREFORE THIS DEED WITNESSES that the Contractor does hereby indemnify and hold harmless the Municipality in respect of all loss or damage that may be incurred or sustained by the Municipality by reason of or in any way arising out of or caused by operations that may be carried out by the Contractor in connection with the aforementioned contract; and also in respect of all claims that may be made against the Municipality in consequence of such operations, by reason of or in any way arising out of any accidents or damage to life or property or any other cause whatsoever; and also in respect of all legal or other expenses that may be incurred by the Municipality in examining, resisting or settling any such claims; for the due performance of which the Contractor binds itself according to law.

SIGNATURE OF CONTRACTOR:	
DATE:	
SIGNATURE OF WITNESS 1:	
DATE:	
SIGNATURE OF WITNESS 2:	
DATE:	



STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

PART B – SPECIFICATIONS AND PRICING SCHEDULE



17. SPECIFICATIONS

PROJECT DESCRIPTION AND SCOPE OF CONTRACT

Description of Works

The works will take place within the existing township of Enkanini Informal Settlement, Kayamandi. The construction basic services including sewer and water networks, three (3) vandal-resistant ablution blocks. The ablution blocks consists of 10 waterborne toilets, 3 concrete wash troughs, and 3 external standpipes per block.

A more detailed description of the component parts of the project is:

- Site establishment
- Implementation of the Contractor's Health and Safety Plan
- Compliance with the Environmental Management Plan
- Clearing and grubbing of the site for all pipe services, earthworks for platforms, including the demolition of existing dwellings.
- The contractor must physically prove all existing tie-in points and invert levels prior to construction.
- The construction of platforms
- Construction of raft foundations
- Erect 10 precast concrete toilet cubicles per ablution facility, including all sanitary fixtures
- Install 3 concrete wash troughs and 3 standpipes per ablution facility
- Construction of 200 mm concrete block retaining walls
- Construction of a 675 m bulk water reticulation system for the development, including inlets, valves, manholes, potable water pipe systems and tie into existing municipal supply
- Construction of 345 m of the bulk sewer reticulation system includes pipes, construction of bulk and domestic manholes, connections to the edge of the newly constructed platforms and tying into existing services.
- The installation of subsurface drains where required
- Trimming of the site
- Handover of the overall works to the relevant Stellenbosch Municipality departments (including all relevant as-built information)

Supply and Installation Specifications

Potable Water Supply Reticulation

- **Bulk Mains:** Supply and install 160mm Outside Diameter (OD) HDPE PE100 PN16 pipes.
- **Secondary Lines:** Supply and install 75mm OD HDPE PE100 PN16 pipes.
- **Internal Piping:** Supply and install SABS-approved Class 16 multi-layer polycop piping for exposed internal sections.
- **Pipe Fittings:** Supply and install 160mm HDPE PE100 PN16 45°, 22.5° and 11.25° bends for all changes in pipeline direction, as scheduled on the water longitudinal sections.
- **Pressure Reduction:** Provide a complete DN150 PN16 pressure-reducing valve. The final downstream set pressure and valve trim shall be confirmed by the Engineer after verification of reservoir pressures and the manufacturer's hydraulic sizing and cavitation assessment.



- **Valves:** Supply and install heavy-duty, vandal-resistant Class 16 isolation valves at each ablation block and individual fixture groups.
- **Terminal Fittings:** Supply and install commercial-grade composite plastic bib taps at all 20mm standpipes and concrete wash troughs.

Sewerage and Drainage Network

- **Bulk Sewer Mains:** Supply and install 160mm OD unplasticized polyvinyl chloride (uPVC) Class 34 pipes.
- **Internal Branches:** Supply and install 110mm OD uPVC Class 34 pipes, laid at a minimum gradient of 1:60.
- **Greywater Drains:** Supply and install 50 mm uPVC soil, waste and vent pipe to SANS 967 from the wash troughs to the sand traps.
- **Manhole Structures:** Supply and install precast concrete ring manholes for all sewer junctions, changes in direction, and tie-ins. All precast concrete rings must be properly seated and sealed with an approved watertight mastic or mortar jointing compound.
- **Manhole Benching:** Benching must be formed to the full half-diameter of the intersecting uPVC pipes and finished with a smooth, steel-trowelled granolithic screed to ensure unobstructed flow.
- **Manhole Covers:** Supply and install lockable cast iron covers and frames to SANS 50124 on all sewer manholes, class D400 where vehicle loading is possible and class B125 elsewhere.
- **Traps & Gullies:** Construct silt and sand traps fitted with heavy-duty, tamper-proof/lockable gratings at all wash bays and standpipe catchpits.
- **Sand Trap Covers:** Supply and install 550mm x 950mm x 50mm precast concrete lids for all sand traps.
- **Pipe Anchorage:** Supply and cast concrete anchor blocks for all sewer pipelines laid on gradients steeper than 1:10.

Foundations, Concrete, and Earthworks

- **Damp Proofing:** Supply and lay 250 Micron Damp Proof Course (DPC) underneath the entire raft foundation footprint.
- **Base Concrete:** Supply and cast Class 25/19 MPa concrete for the retaining wall footings.
- **Structural Concrete:** Supply and cast Class 30 MPa concrete for beams and the 100mm concrete ground slabs.
- **Infill Concrete:** Supply and cast Class 20 MPa concrete for blockwork infill and retaining wall bases.
- **Mesh Reinforcement:** Supply and install BRC REF 193 steel reinforcing mesh, placed 30mm from the top of the slab.
- **Spacers/Stools:** Supply and install steel reinforcement stools (1R8-04) prior to casting.

Superstructure and Building Elements (Ablution Blocks)

- **Precast Concrete Panels:** Wall, Floor, and Roof panels must be constructed in accordance with drawing 2501141-001-05-LA-0002. Attention to be given to different wall panel types, where forming Vent and Pipe Openings are required
- **Blockwork for Retaining Walls:** Supply and build walls using 200mm concrete blocks with a minimum compressive strength of 7 MPa.
- **Mortar:** Supply and mix Class II mortar for all blockwork.
- **Brickforce:** Supply and install SABS-approved galvanized brickforce in every course of blockwork.
- **Starter Bars/Columns:** Supply and install Y12 steel rebar at 200mm center-to-center spacing.



- **Doors:** Supply and hang 1820mm x 770mm x 68mm rotomolded heavy-duty polyethylene doors (10 per ablution block).
- **Ironmongery:** Supply and install heavy-duty, commercial-grade, vandal-resistant hinges and locking mechanisms for all cubicle doors.
- **Wash Troughs:** Supply and install precast or structurally reinforced concrete wash troughs with smooth, easily cleanable internal surfaces (3 per block).
- **Standpipes:** The vertical water supply line feeding the standpipe must be 20mm diameter SABS-approved Class 16 multi-layer polycop piping encased in a concrete sleeve. (3 per block).
- **Toilets:** Supply and install 10 complete waterborne/flushing toilet systems per ablution block housed in the lockable cubicles.

Retaining Walls and Stormwater Management

- **Retaining Wall Blocks:** Supply and build 200 mm hollow concrete block retaining walls, cores filled, on a reinforced concrete footing, to Option 1 on drawing 2501141-001-05-LA-0003 (up to 1.0 m maximum retained height).
- **Subsoil Pipes:** Supply and install 110mm slotted uPVC pipes behind retaining walls.
- **Drainage Stone:** Supply and place 19mm drainage stone around subsoil pipes.
- **Geotextile:** Supply and wrap subsoil drains in U14 Geofabric (Bidim) cloth with a minimum 500mm overlap.
- **Concrete Aprons:** the raft slab extends 1.0 m beyond the enclosure wall as an apron with a minimum 1:50 fall away from the block; no separate apron is constructed.

Description of Site and Access

The Contract covers the provision of civil engineering services for the construction of sewer and water networks, including 30 waterborne toilets within the existing Enkanini Informal Settlement, Kayamandi. GPS coordinates are as follows: 33°55'35.86"S, 18°50'41.65"E.

The Council and the property owners shall be indemnified against any damages or claims arising from the use of any tracks and rights of way by the Contractor or his agents / deliveries. Access over private property requires the permission of the owners and the Contractor is required to make contact with relevant parties to ensure that the necessary permission is obtained prior to any work commencing on the various properties.

The existing access to the site is via gravel roads. The Contractor shall reinstate the surface to its original condition once the contract is complete should they be damaged. He shall also upgrade and maintain existing roads and tracks used for construction purposes throughout the contract period by filling, watering, compacting and grading suitably imported gravel fill material. Inclusive of forming drainage channels as necessary giving vehicular passable access to the property owners and tenants, construction teams, etc. at all times, all to the satisfaction of the Engineer.

The Contractor shall take cognisance of the aforementioned items concerning roads and tracks and allow for any costs in his tender under the relevant section in the Schedule of Quantities.



Nature of Ground and Subsoil Conditions

No site-specific geotechnical investigation has been carried out. The design is based on the AECOM (2020) Kayamandi Reservoir geotechnical report issued with the Detailed Design Report, with founding inspection and DCP testing at each block during construction. A geotechnical investigation of the three block sites is to be carried out under PS.8 before the platforms and foundations are constructed.

Temporary Works

- Temporary works expected during the implementation of the Works include:
- Site Establishment
- Search for, expose, protect and backfill existing services
- Relocation of existing services
- Accommodation of public and construction traffic
- Maintenance of portable toilets in areas that have been relocated previously



Title	Construction of basic services (sewer, water networks including 30 waterborne precast toilets) at Enkanini Informal Settlements, Kayamandi.
Function and broad outline of contents	<p>Bulk earthworks for platforms</p> <p>Construction of sewer and water reticulation</p> <p>Construction of ablution block foundations and top structures</p> <p>Excavate & cast concrete footings for the block retaining walls</p> <p>Build the 200 mm concrete block retaining walls</p> <p>Construction of sub-soil drainage</p> <p>Trim & tidy the site</p>

TOPIC	COMMENTARY
Client's / employer's objectives	Access to basic services such as water and sanitation. The objective of the project is to improve the provision of communal water and sanitation facilities in informal settlements by constructing new ablution facilities that comprise of sewer, water and toilet facilities.
Description of the services	<p>The works to be constructed consists of earthworks for platforms, retaining walls, surface stormwater management and drainage on the platforms, water and sewerage reticulation networks and the connection of these networks to existing bulk services.</p> <p>The project scope will be done in a single phase. The contractor is required to programme construction activities such that are constructed in such a manner as not to cause any contractual claims and delays.</p> <p>The contractor shall at the onset of the contract locate and identify all obstructions and report to the engineer immediately. The contractor shall bypass construction areas affected by obstructions. These areas are to be revisited once the obstructions are removed.</p> <p>The contractor will be required to complete the following:</p> <ul style="list-style-type: none"> • Sewer reticulation • Water reticulation • Bulk earthworks for platforms • Construction of Raft Foundations and Sand traps • Construction of precast concrete toilet cubicles including all sanitary fixtures • Supply and install Concrete wash troughs and Standpipes <p>The consultant will provide all setting out information and relevant data for the contractor to accurately construct the works. The contractor is to also provide services for demolishing existing informal structures. Such allowances have been made for in the Bill of Quantities</p>
Extent of the services	Construction of Civil Engineering Services, Raft Foundations, Toilet Facility Top Structures and Fittings.
Use of reasonable skill and care	The contractor is required to exercise reasonable skill and care at all times. Furthermore, Health & Safety (Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993) and conditions of establishment needs to be adhered to throughout the duration of the contract.



Co-operation with other services providers	All interaction with various departments such as Water and Sanitation, Electricity, are to run parallel to construction works should any existing services be affected.
Brief	As outlined in this tender document; Time for achieving practical completion on the scope of works is 65 working days (about 3 months); The contractor is required to submit monthly progress reports, inclusive of photographs and up-to-date detailed program
Reference data	<ul style="list-style-type: none"> • Stellenbosch Municipality Standard Specifications 2015 • Stellenbosch Municipality Standard Drawing Details 2015 • Scope of Works (refer to scope of works mentioned above) • Electronic Book of Drawings (Issued with this tender document – Cd)
Applicable national and international standards	<ul style="list-style-type: none"> • SAICE GCC 2025 Conditions of Contract • CIDB Conditions of Tender (2015) • Stellenbosch Standard Engineering Specifications
Particular/Generic specifications	<ul style="list-style-type: none"> • The contractor's attention is drawn to section C.3.2 (Project Specifications) • The contractor's attention is drawn to section C.3.3.2 (Amendments to Particular Specifications) • The contractor's attention is drawn to section 3.4 of this tender document
Approvals	<p>The Contractor is to obtain approval in writing from the Engineer prior to commencing any works that deviate from drawings and/or specifications. Such Approvals are to be appropriately documented in a Site Instruction Book issued by the Employer's Agent;</p> <p>The Contractor is to take note that all as-built records shall be maintained and reviewed monthly by the Engineer. The Engineer shall then provide his acceptance/declination of the as-built results to permit payment for such works constructed. In the event of the declination of test results by the Engineer, the Contractor shall be paid out 50% of the monetary value of the failed works until such time corrective measures are completed. This shall apply to all works, i.e. bulk earthworks, sewer reticulation, water reticulation, structural foundations and top structures. No alternative arrangement shall be entertained from the contractor.</p>
Procurement	<ul style="list-style-type: none"> • The attention of the Contractor is drawn to clause F.3.11 (Evaluation of Tenders). After satisfying the minimum qualification criteria under the functionality items, Method 1 will be employed to further adjudicate the contractor's bid submission. • In addition, the contractor will be required to employ sub-contractors as part of the CPG component detailed in this document. Such procurement shall be done through the Wards' existing business forum together with the Ward Councillor and CLO. A CPG plan will be required from the appointed contractor within 1 month of commencing construction and shall detail the different activities intended for sub-contracting. • The procurement of any local labour shall be done through the CLO and shall be agreed by the Ward Councillor. A letter shall be provided.
Access to land / buildings / sites	Arrangements for access to the erven is to be addressed with the CLO, upon which the contractor is to comply.



Planning and programming	<p>i) Preliminary Programme With reference to Clause 3.11.9 (Quality Criteria) and returnable form “Preliminary Programme”, the tenderer is required to submit a basic preliminary programme in a gant chart format. This programme shall take cognizance of the scope of works and shall be based on the specified time for achieving practical completion as outlined in clause 1.1.1.14 of the Contractual Data. Alternative completion times will only be considered if the tenderer duly indicates the details thereof on returnable form “Amendments, Qualifications and Alternatives”.</p> <p>ii) Construction Programme The successful tenderer shall submit a construction programme, for approval, in terms of the requirements outlined in Clause 5.6 of GCC 2025 within the timeframe specified in Clause 5.3.2 of the Contract Data. Regarding the contents of the programme, specific reference shall be made to Clause 5.3.2 and the contractor shall be responsible for indicating sufficient detail which reflects the sequence and extent of works, specific inspections, all milestones, the critical path, and other pertinent requirements of the scope of work. The construction programme shall be subject to review on a monthly basis or at the discretion of the Engineer and Employer.</p>
Software application for programming	For ease of submission and uniformity, it is a requirement that the construction programme be prepared by the successful tenderer using Microsoft Project or the like. Additionally, the final programme shall be provided in a .pdf format to the Employer’s representative.
Quality management	The successful tenderer shall implement specific quality control measures to ensure that the works are constructed as per the standard specifications, project specifications and construction drawings. The Quality Control Statement shall be attached to returnable form “Construction Approach, Methodology and Quality Control” and reference shall be made to site control testing, construction supervision, structured monitoring mechanisms such as checklists and other measures/processes that the tenderer deems to be significant. The Engineer will continually assess the quality of works on site and instructions will be provided for non-compliance accordingly.
Format of communications	<p>Each instruction, certificate, submission, proposal, record, acceptance, notification, reply and other communication which this contract requires is to be communicated in a form which can be read, copied, and recorded. Writing is to be in the language of this contract, i.e. English.</p> <p>The contractor is to only receive instructions from the Employers Agent or the Employers Agent Representative. Should the contractor undertake any works from an instruction given to him/her by a third party, he will be solely responsible for any impacts thereof, including costs.</p>
Key personnel	The format for key personnel as illustrated under Section T2 (Returnable) is to be followed and carried through to the bidder’s format for Key Personnel. This is to be looked at in conjunction with section F3.11.9 (Quality Criteria for Key Personnel). It is noted at this juncture that at the commencement of construction, the key personnel will change for unforeseen reasons. In this case, the contractor shall provide a suitable replacement which will have similar experience for respective projects as the originally proposed individual at time of tender. Further discussions are to be held with the Employer and Employer’s agent as this is situation specific.



Management meetings	<p>There will be a minimum of one (1) progress meeting and one (1) technical meeting per month. The contractor is to ensure that the Contracts Manager and Site Agent are present during both meetings. CLOs will be required to attend all progress meetings, and both CLOs will be required to be present when works are being discussed.</p> <p>This is over and above all meetings that the Contractor may deem necessary for the execution of the works.</p>
Forms for contract administration	<p>The contractor will be provided with suitable reporting formats by the consultant at the commencement of construction. These reports detail the contractors progress, all subcontractors on site, Health and Safety audit findings, Environmental Audit findings, plant and machinery on site and an organogram specific for the site of works.</p> <p>These reports will have to be presented at the monthly progress meeting. Minutes of all meetings, however, will be drafted by the Resident Engineer.</p>
Electronic payments	<p>Arrangements for electronic payment of payment certificates will be made between the Contractor and Employer during the Site Handover Meeting.</p>
Daily records	<p>It is a requirement that a site diary with all relevant details be maintained on site. This diary must be signed off and agreed to by both the Engineer and Contractor, daily. These site diaries must accompany the Contractor's monthly payment certificates and payment shall not be processed should this not be complied with.</p> <p>A suitable format of the site diary will be made available to the successful tenderer, by the Client.</p>
Professional indemnity insurances	<p>Not applicable.</p>
Payment certificates	<p>Payment certificates are to reach the Client by the 25th of each month. The following items are to accompany each payment certificate, but shall not be limited to the list below:</p> <ul style="list-style-type: none"> • Tax Invoice – Tax invoice number, Contract number, Project Description, correctly dated, to include both the Client's and contractor's Tax numbers, physical and postal addresses and to be addressed to Deputy Head, Development Engineering. • Fully completed FTE's (Client to provide format). • Summary of supporting measurements for period of claim – to be signed off by both the Contractor and Engineer.
Use of documents by the employer	<p>As-built drawings: The client will employ the as-built drawings in order to carry out any necessary maintenance to the reticulation systems being installed under this contract. In addition, this as-built data may be used to determine future connection points should further development around the site occur. It is imperative that the surveyor provides accurate positions, invert, and cover levels so that the Engineer is able to accurately reproduce the installed reticulation systems.</p>
Proof of compliance with the law	<ul style="list-style-type: none"> • Valid Tax Clearance Certificate at Tender Closing • Proof of Company/CC/Partnership Registration • Proof of JV agreement and registration (if applicable) • Identity Documents of Directors/Members/Partners • Municipal Fees for Proof of Address • CIDB Registration • Bank Rating Letter



PROJECT SPECIFICATIONS

PREAMBLE

In the event of any discrepancy between a part or parts of the Standard or Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the Specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Employer's Agent before the execution of the work under the relevant item.

C3.2.1 GENERAL

PS.1 SERVICES

This Clause is to be read in conjunction with the provisions and obligations as contained in SANS 1921-1 and SANS 1921-2.

Further to Clauses PS.1 and PS.2 of this specification, tenderers are to note that allowance must be made under this item and / or the appropriate rates, for all costs incurred as a result of complying with these clauses. It shall also cover liaison with the services organisations and accommodation of their work gangs / contractors on site.

PS.1.1 Proving Underground Services

This clause must be read in conjunction with Clause DB.5.1.2, the requirements of which shall be extended to cover all earthworks operations whether for trenching or bulk earthworks, in the vicinity of underground services.

It is stressed that all services in a particular area must be proven before commencing work in that area.

Insofar as bulk earthworks are concerned, from site observations can reasonably be expected that such services are likely to exist where excavations are to take place, the Contractor shall without instructions from the Employer's Agent carefully excavate by hand to expose and prove their positions.

The cost of the proving trenches is to be included in the work covered by Clause DA.8.3.

When a service is not located in its expected position the Contractor shall immediately report such circumstances to the Employer's Agent who will decide what further searching or other necessary action is to be carried out and shall instruct the Contractor accordingly. The cost of this additional searching shall be to the Council's cost and shall be paid for under DB.8.19 - Proving Existing Services.

Should any service be damaged by the Contractor in carrying out the works and should it be found that the procedure as laid down in this clause has not been followed then all costs in connection with the repair of the service will be to the Contractor's account.



Proving of services shall be completed at least two weeks in advance of the actual programmed date for commencing work in the area. The position of these services located must be co-ordinated and levelled by the Contractor, and the information given in writing to the Employer's Agent's Representative.

The requirements of this clause do not relieve the Contractor of any obligations as detailed in the Conditions of Contract or under Clause 4.17 of SANS 1921-1.

PS.1.2 Relocation of Existing

This clause shall be read in conjunction with Clause PS.1.1

Relocation of services shall generally be carried out by the relevant services organisation. Generally, their work shall include the excavating and bedding the service which will include backfilling to a depth of approximately 300 mm above the service. The remainder of the backfilling shall be carried out by the Contractor.

PS.2 Appointment of a Geotechnical Engineering Laboratory

The contractor is to appoint a SANAS accredited geotechnical laboratory dedicated to the contract for a 3-month appointment period. The contractor is to obtain a minimum of 3 quotations. The tendering procedure shall be done under the supervision of the Employer's Agent. The Employer's agent shall offer assistance as, and when, required by the contractor in the appointment of a suitable geotechnical laboratory. The final approval for the successful laboratory shall be the decision of the Employer. The laboratory shall be for the acceptance testing required by the Engineer and his team. The laboratory shall be required to submit CVs of key personnel identified to undertake the field work and reporting under this contract.

It is to be noted under this item that the geotechnical laboratory shall be required to hire the services of a Professionally Registered Geotechnical Engineer on an ad hoc basis. Such services shall be requested at the Employers' Agent's discretion to provide confirmation of embankment and platform stability. A CV of the proposed individual is to be attached together with the quotation, along with a copy of their professional indemnity.

Further details shall be provided at time of acquiring the services for the geotechnical engineering laboratory.

This laboratory is intended for acceptance tests only. The contractor shall still be responsible for all control testing at his own cost. Should the contract also wish to use the appointed commercial laboratory for the purposes of site control testing, the costing shall then be shared between the contractor and employer on a 50/50 basis.



PS.3 SURVEY

PS 3.1 SURVEY FOR, AND PREPARATION OF, 'AS BUILT' DRAWING

The Contractor shall submit the following “For Record” data to the Design Consultant to complete the required “For Record” Drawings before a Certificate of Completion will be issued:

Water, Sewer and other services:

- Co-ordinates, invert and cover levels of all water, sewer and other service controls that have been modified or constructed as new, during the contract,
- Including but not limited to: open lined concrete drains, stormwater catchpits, manholes, kerb and channels, precast pipe culverts and outlet structures.
- Co-ordinates of all other services e.g., cable duct markers, valve covers, service manholes etc. that have been either modified or constructed as new, during the contract.

General:

- Notwithstanding the above, the Contractor is to supply to the Design Consultant all other information necessary, to clearly indicate changes/modifications to the construction drawings during the contract period that will be required by the Design Consultant so that they can produce the “For Record” drawings.
- Each surveyed point shall be suitably coded and identifiable by the Design Consultant and shall be supplied on a CD/DVD, in an Ascii file with the following format: -
Code [SPACE]XCo-ordinate[SPACE] Coordinate[SPACE]Level[SPACE]Description
- The above information is to be given to an accuracy of three decimal places and is to be surveyed by a suitably qualified person.

In addition to the above, all ‘For Record’ information must be provided on a drawing in AutoCAD and DXF format together with a hard (paper) copy format showing the modifications undertaken during the contract period.

Suitable checks on the accuracy of the information provided may be carried out by the Design Consultant and should any of the information provided be found to be inaccurate or untrue, the Employer reserves the right to withhold payment or to employ the services of an engineering surveyor to re-survey all the works listed above, at the Contractor’s expense. The Employer shall request a minimum of three quotations from three independent engineering surveyors of his choice, and the lowest quotation will be appointed, and the cost thereof will be deducted from monies owing to the Contractor.

The ‘For Record’ Data shall be the responsibility of the Contractor and shall be paid for under the item ‘For Record’ Data in the Contractors Preliminary and General Costs.

The unit of measurement shall be the “SUM”

The Contractor must also forward to the Engineer, a material “as built” spreadsheet in a format that is acceptable by the Client.

The completion certificate shall not be issued unless the above information in totality, has been forwarded to the Engineer.



PS 3.2 Additional Site Survey

The Engineer may instruct the contractor to conduct a survey during the course of the contract in order to facilitate re-design due to immovable obstructions or to facilitate the design of new settlements. The contractor will be required to submit all survey files in an Ascii format and drawings in a DXF/DWG format.

The unit of measurement shall be (sum) and the rate shall include for the survey as directed by the Engineer and the submission of all hardcopy and electronic files required by the Engineer.

PS.4 OCCUPATIONAL HEALTH AND SAFETY

PS.4.1 General Statement

When considering the safety on site the Contractor's attention is drawn to the following:

- (1) Personal protective equipment (PPE) and inspection records and registers
- (2) The area has rock that will require blasting
- (3) The works will require machinery and plant of varying size.
- (4) The manual moving of heavy precast products may be required.
- (5) The raw asphalt used will be delivered to site at a high temperature, which, after processing, remains hot for some time.
- (6) The site has a very steep gradient. Plant and machinery needs to be well controlled.
- (7) Restricted access to site and steep gradient for heavy vehicles
- (8) Trenches for the laying of sewer pipes and construction of manholes will be required.
- (9) Shoring of deep trenches to prevent collapse (where necessary)
- (10) Holes/trenches to be covered, guarded and clearly marked to prevent residents and labour from falling in.
- (11) Access to the site will be through existing built up areas which have driveway vehicular access, pedestrian movement, small children and pets crossing the road

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2014 issued on 7 February 2014 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of Section 37(2) of the Occupational Health and Safety Act.



PS.4.2 Health and Safety Specifications and Plans to be submitted at tender stage

PS.4.2.1 Employer's Health and Safety Specification

The Employer's Health and Safety Specification is included in C3.4: Particular Specifications.

PS.4.2.2 Tenderer's Health and Safety Plan

At tender stage only a brief overview of the tenderers perception on the safety requirements for this contract will be adequate. This will be attached to T2.2: Contractor's Health and Safety Plan.

Only the successful Tenderer shall submit a separate Health and Safety Plan as required in terms of Regulation 7 of the Occupational Health and Safety Act 1993 Construction Regulations 2014, and referred to in T2.2: Contractor's Health and Safety Plan.

The detailed safety plan will take into consideration the site specific risks as mentioned under PS.2.1 and must cover at least the following:

- (i) A proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 9 to 29;
- (ii) Pro-active identification of potential hazards and unsafe working conditions;
- (iii) Provision of a safe working environment and equipment;
- (iv) Statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (*Regulation 7*);
- (v) Monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
- (vi) Details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 8 and other applicable regulations; and
- (vii) Details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2014.

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work, before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs

A generic plan will not be acceptable.



PS.4.2.3 Cost of compliance with the OHSA Construction Regulations

The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract. Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

Items that may qualify for remuneration will be specified in the Employer's Health and Safety Specification.

PS.5 SITE SECURITY

PS 5.1 Contractor Site Security

The Contractor shall, for the duration of the contract, provide sufficient security and watchmen to adequately ensure the safety and protection of the works, the Contractor's staff, including local labour and subcontractors, and all site plant and construction equipment required for the works.

Site Security, in conjunction with the SAPS (where necessary), shall be responsible for removal of disruptive elements, that may interrupt the progress of the contract through acts such as, but not limited to, intimidation, threats of disruption, violent disruption, or criminal and illegal activity by the local community or independent organisations or entities that may result in slowing down or partial or total stoppage of the works.

Payment for this item shall be made under Section 1, Part AB of the Bill of Quantities.

PS 5.2 Additional Site Security

This specification covers the provisional allowance for supplementary security measures that may be required during the construction phase. The Contractor shall utilize this allowance to provide additional security personnel or infrastructure on site, specifically to guard against any disruption of the works throughout the duration of the contract.

The deployment and utilization of this additional security shall not be at the Contractor's sole discretion, but shall be executed strictly as directed and approved by the Engineer. Payment for this item shall be made under Section 1, Part AB of the Bill of Quantities, where it has been allowed for as a Provisional Sum.



PS.6 SOCIAL FACILITATOR

This specification covers the provision, management, and coordination of a Social Facilitator and Community Liaison Officers (CLOs) for the duration of the project. The Contractor is required to engage the services of CLOs for a period of 3 months to manage community relations, local workforce integration, and dispute resolution.

The CLO shall act as the primary liaison between the Contractor, the local Kayamandi community, and the Ward Councillor. A key responsibility of the CLO includes facilitating the procurement of local labour and subcontractors to meet the Contract Participation Goal (CPG) component. This procurement process must be executed through the Ward's existing business forum and explicitly agreed upon by the Ward Councillor, which must be evidenced by a formal letter of approval.

Furthermore, the CLO is strictly responsible for addressing and arranging access to the various erven and properties within the informal settlement, and the Contractor is obligated to comply with these mediated access arrangements. To ensure clear communication and project alignment, both appointed CLOs are mandated to attend all scheduled progress meetings and must be present whenever site works and community impacts are being discussed.

PS.7 REMOVAL OF ROADWAYS, SIDEWALKS AND/OR MEDIANS

This specification covers the provision of demolishing existing roadways, sidewalks, V-drains and transportation of the demolished material to a municipal approved dump site. The tendered rate for the demolishing of these structures must be fully comprehensive, incorporating all costs associated with discarding the material, haulage from the Enkanini Informal Settlement site, and the payment of any applicable land fill fees.

PS.8 GEOTECHNICAL INVESTIGATION

This specification covers the provisional allowance for a geotechnical investigation of the three ablution block sites. The utilization of this allowance shall not be at the Contractor's sole discretion, but shall be executed strictly as directed and approved by the Engineer. Payment for this item shall be made under Section 1, Part AB of the Bill of Quantities, where it has been allowed for as a Provisional Sum.



PS.9 IMPORT AND HANDELLING OF G6

PS 9.1 Import of G6 Material

This specification covers the provision and importation of suitable G6 material required for the construction of the earthwork platforms. The Contractor is obligated to source and import G6 material from an approved contractor's offsite location or a commercial source. The tendered rate for the importation of this material must be fully comprehensive, incorporating all costs associated with sourcing the material, haulage to the Enkanini Informal Settlement site, and the payment of any applicable royalties.

PS 9.2 Compaction of G7 Material

This specification governs the handling and preparation of the imported G6 material on site. The scope of works dictates that the imported G6 material must be properly spread, watered, and compacted. The Contractor shall ensure that the G6 fill material is compacted to a minimum density of 95% Modified AASHTO. This rigorous compaction standard is required to establish stable, level building platforms for the ablution facilities and to prevent any future differential settlement across the terraced site.

PS.10 SUBSOIL DRAINAGE

This specification encompasses the complete installation of subsoil drainage systems, which are critical for managing subsurface water behind retaining walls and beneath the earthwork platforms. The Contractor is required to supply and install 110 mm slotted uPVC sub-soil drain pipes.

To ensure proper water filtration and to maintain the longevity of the drainage system, the pipe must be laid centrally within a 300 mm wide by 450 mm deep surround constructed entirely of 19 mm drainage stone. Furthermore, to prevent the ingress of fine soil particles that could clog the system, this crushed stone surround must be completely wrapped in U14 Bidim or a similar Engineer-approved geofabric. The installation must ensure a minimum overlap of 500mm for the geofabric wrapping.

PS.11 FOUNDATIONS

This specification governs the structural concrete works, subgrade preparation, and the requisite sequential casting methodology for the facility's foundation system, which encompasses the ground slabs, structural foundation beams, and an integrated reinforced concrete sump.

A Grade 20/26 concrete blinding layer must be cast to provide a clean working surface. Following the curing of the blinding, an approved commercial weed killer must be applied to the prepared area.

The foundation system features 300 mm wide by 350 mm deep load-bearing foundation beams, a 100 mm thick ground slab, and an integrated effluent sump. To ensure structural



integrity and proper water-tightness, this system must be cast sequentially. In the first sequential pour, the foundation beams and the base slab of the sump must be cast utilizing Grade 30/26 concrete. Once the initial pour has sufficiently cured and the reinforcement and formwork are in place, the second sequential pour shall commence, consisting of the 100mm thick ground slabs and the vertical walls of the sump, utilizing Grade 30/26 concrete.

All structural concrete must be adequately reinforced as per the engineer's bending schedules, comprising standard high tensile and mild steel reinforcement bars within the beams and sump structure, and Ref 193 high tensile steel fabric reinforcement mesh placed within the 100mm slabs. Formwork for all exposed vertical sides must be designed to achieve a Class 3 (Smooth) finish. Finally, all unformed, exposed horizontal concrete surfaces of the slabs and sump must be finished with a standard wood-floated finish.

PS.12 SEWER AND GREYWATER

PS 12.1 Precast Concrete Sand Trap Lids

To secure the drainage infrastructure and prevent foreign debris from entering and blocking the sewer network, the Contractor must supply and install precast concrete Sand Trap lids. These precast concrete lids must be manufactured to the precise dimensions of 550mm x 950mm x 50mm to properly enclose the sand trap structures.

PS 12.2 Concrete Drainage Gullies

To manage greywater runoff effectively, the Contractor shall construct silt and sand traps fitted with heavy-duty, tamper-proof, and lockable gratings located at all wash bays and standpipe catchpits. Concrete drainage gullies specifically for the standpipes must also be supplied and installed. All greywater generated from the concrete wash troughs and standpipes must be piped directly to these sand traps utilizing 50 mm uPVC soil, waste and vent pipe to SANS 967.

PS 12.3 Cistern Toilets

This specification details the comprehensive supply and installation of specific sewer and greywater appurtenances required for the ablution facilities. The Contractor is required to supply and install complete waterborne cistern toilet systems. Each of the three ablution blocks must be fully equipped with 10 flushing toilet systems, which are to be securely housed within the lockable concrete cubicles

PS 12.4 Connection to the Existing Municipal Manhole

This specification covers the connection of the new 160mm collector sewer into the uppermost manhole of the existing 250mm municipal sewer, at the invert level of 130.240m recorded on the detail survey. Before the collector is laid, the Contractor must expose and prove the position, invert and cover level of the existing manhole and report these to the Engineer, who will confirm the design inverts. The works shall include cutting the opening



in the manhole wall, building in the pipe with a flexible joint within 300mm of the outside face, re-benching the channel to the full half-diameter of the pipes with a steel-trowelled granolithic finish, and making good the wall and the cover slab. To prevent any spillage or disruption of the municipal service, the Contractor must control or over-pump the existing flow while the work is in progress, and shall give the Municipality's Water and Sanitation department not less than seven days' notice and accommodate their attendance on site.

The unit of measurement shall be the sum, and the tendered rate shall be comprehensive and inclusive of all labour, plant, and materials required to complete the connection, including the reinstatement of the surrounding surface.

PS 12.5 Testing and Inspection of Sewers

PS 12.5.1 Watertightness of manholes

The Engineer may request a watertightness test of any manhole. The watertightness test shall be conducted as follows:

The pipe ends shall be sealed with temporary end caps.

Infiltration: The excavation surrounding the manhole shall be flooded to approximately the top of wall level and this depth of water shall be maintained for at least 48 hours. The manhole will have satisfied the test requirements provided there is no sign of infiltration of water into the manhole.

Exfiltration: The manhole shall be filled with water to the top of wall level and this depth maintained for at least 24 hours. Water shall be added to maintain this level. At the end of the subsequent 24 hour period the drop in water level shall be measured. The manhole will have satisfied the test requirement provided the drop is less than 75mm per metre in depth of the manhole measured from channel invert to the original height of the water. A shorter testing time may be allowed at the discretion of the Engineer, subject to a minimum of 3 hours, in which case a 'drop in level' pro rata to the time tested shall be used.

PS 12.5.2 Torch and mirror test *

For the pipeline to be acceptable the visibility of the plug/reflector shall be at least 50% of its area.

PS 12.5.3 CCTV Inspection *

The Contractor shall perform closed circuit television inspection (CCTV) as a post-construction method to determine if the pipeline has been installed as required, all joints have been properly joined *welded and the beads properly removed*, and to inspect the lateral erf connections to the main sewer. The CCTV system shall have a tractor mounted rotating lens camera with articulating head, capable of pan and rotate. The system shall be capable of recording onto DVD and shall be equipped with an inclinometer. Each joint and erf connection shall be scanned 360 degrees. The camera shall be operative in 100% humidity conditions. Lighting for the camera shall minimize reflective glare. Lighting and camera quality shall be suitable to provide a clear, in focus picture of the entire periphery of the pipe for all conditions encountered during the work.



Focal distance shall be adjustable through a range from 75mm to infinity. The remote reading distance counter shall be accurate to one percent (1%) over the length of the particular section being inspected. The camera, television monitor and other components of the color video system shall be capable of producing a minimum of 500 line resolution. All such inspections shall be performed by personnel trained to locate and identify breaks, obstacles and lateral erf connections by closed circuit color television.

Documentation consisting of a color video DVD, a written report detailing the condition of the mainline and joints, and a colour thematic map indicating the location of the main sewer and the lateral erf connections shall be submitted to the Engineer for approval prior to final payment

The newly installed pipe shall be visibly free of defects, which may affect the integrity or strength of the pipe. If in the opinion of the Engineer such defects exist, the pipe shall be repaired or replaced at the Contractor's expense. Any section of the pipe with a gash, blister, abrasion, nick, scar, or other deleterious fault greater in depth than ten percent (10%) of the wall thickness shall not be used and shall be removed from the site.

Post construction DVDs, reports and thematic maps shall be submitted to the Engineer for review prior to final payment. Should any portion of the inspection DVDs be of inadequate quality or coverage, as determined by the Engineer, the Contractor shall re-inspect the unacceptable portion at no additional expense to the Employer. All original DVDs shall remain the property of the Employer.

PS 12.5.4 Acceptance criteria *

The acceptance of the pipe length or manhole shall depend upon whether it satisfies the criteria set out in SABS 1200 LD clauses 6, 7 and the PS clauses above.

PS.13 WATER RETICULATION FITTINGS

PS 13.1 20mm Standpipes

This specification governs the water reticulation fixtures and surface installations required for the ablution facilities. The Contractor is required to supply and install 20mm standpipes, complete with all necessary fittings. The vertical water supply line feeding each standpipe must be constructed from 20mm diameter SABS-approved Class 16 multi-layer polycop piping, which must be securely encased within a concrete sleeve to protect the infrastructure against damage and vandalism.

PS 13.2 Concrete Wash Troughs and Stands

Works includes the supply and installation of precast concrete wash troughs on the precast concrete pedestals supplied with them. These wash troughs must be manufactured with smooth, easily cleanable internal surfaces to maintain sanitary conditions, and they must be sized, detailed, and installed in accordance with Section C-C of drawing 2501141-001-05-LA-0002.



PS 13.3 Plastic Bib Taps

To provide robust vandalism resistance and eliminate material scrap value, the Contractor shall supply and install heavy-duty, commercial-grade composite plastic bib taps. These plastic bib taps, inclusive of all necessary connection fittings for leak-free operation, must be securely installed at all 20mm standpipes and concrete wash troughs across the facilities.

PS 13.4 Warning Tape and Tracer Wire

To allow the buried pipelines to be located and protected during future excavations, the Contractor shall supply and install detectable warning tape 300mm above the crown of all PE pipelines, together with an insulated copper tracer wire of not less than 2.5mm² taped to the pipe along its full length. The tracer wire must be carried into every valve chamber and valve box and terminated on an accessible test point, with all joints soldered or crimped and sealed. The continuity of the wire must be tested from end to end in the presence of the Engineer before the pipeline is handed over.

The unit of measurement shall be the meter of pipeline, measured once over the bulk main and the branches, and the tendered rate shall be inclusive of the tape, wire, joints, test points and testing.

PS 13.5 Trench Shoring, Dewatering and Protection (Provisional)

This specification covers the provisional allowance for trench shoring, dewatering, safe access and the protection of adjacent structures in restricted or unstable excavations, where the Engineer instructs measures beyond the Contractor's ordinary obligations under SANS 1200 DB and the Construction Regulations. The utilization of this allowance shall not be at the Contractor's sole discretion but shall be executed strictly as directed and approved by the Engineer in writing, and the work shall be measured and valued as instructed. Payment for this item shall be made under Section 6, Part DB of the Bill of Quantities, where it has been allowed for as a Provisional Sum, and any balance not expended shall be deducted from the contract sum.

PS 13.6 Existing Service Crossings (Provisional)

This specification covers the provisional allowance for sleeves, concrete protection, special bedding and special reinstatement at crossings of existing services that are not covered by the trench rates, once the services have been proven under PS.1.1. The utilization of this allowance shall not be at the Contractor's sole discretion, but shall be executed strictly as directed and approved by the Engineer, and the work shall be measured and valued as instructed. Payment for this item shall be made under Section 6, Part DB of the Bill of Quantities, where it has been allowed for as a Provisional Sum, and any balance not expended shall be deducted from the contract sum.



PS 13.7 Connect into existing live mains supply

This specification covers the connection of the bulk main to the reservoir tie in point at the Kayamandi Reservoir. The Contractor shall supply and install a fully end-load-restrained 160mm PE OD x DN150 PN16 mechanical flanged adaptor or Steel Ts, complete with a portable-water-approved EPDM gasket, stainless steel or coated bolts, and corrosion protection to standard drawing SW13. The Reservoir tie in must be constructed in consultation with the local municipality to avoid any unplanned interruption of the supply, the Contractor shall programme the connection with the Municipality's Water Services department and shall not interrupt the supply without their written agreement.

The unit of measurement shall be the number (No.) of tie ins installed, and the tendered rate shall be inclusive of the proving of the outlet pipes, flange, the gasket, bolts, restraint, corrosion protection and the connection.

PS 13.8 Fire Hydrant at the Low Point (Scour Point)

No scour valve is provided on the bulk main. The Contractor shall supply and install a DN80 fire hydrant on a tee at the dead end of the bulk main at chainage 666.0m, which is the low point of the main, in accordance with standard drawing SW2, complete with its isolating valve, riser, all flanged jointing materials and corrosion protection to standard drawing SW13. The hydrant serves as the scour point for flushing, disinfecting and emptying the main and is not intended as a fire-fighting supply; it lies approximately 34m of pipe from the last ablution block. To prevent damage during scouring, the discharge must be directed through a hose to an approved point so that it cannot undermine the pipeline, the platforms or any dwelling.

The unit of measurement shall be the number (No.) of hydrants installed, and the tendered rate shall be inclusive of the tee, isolating valve, riser, hydrant, jointing materials and corrosion protection. The chamber is measured separately under PS 13.11.

PS 13.9 Valve Boxes for Branch Isolating Valves

To secure the branch isolating valves against tampering and damage, each of the three 75mm branch isolating valves shall be housed in a cast iron surface box with a lockable cover appropriate to the loading at its location. The box must be set on a precast or in-situ concrete surround, with an extension spindle where the valve is deeper than 600mm, and a valve marker to standard drawings SG6 and SG7.

The unit of measurement shall be the number (No.) of valve boxes installed, and the tendered rate shall be inclusive of the box, surround, extension spindle, marker and reinstatement.



PS 13.10 Supply and install DN150 PN16 PRV

PS 13.10.1 Scope

Construct a reinforced concrete PRV chamber, and supply, install, test and commission all pipework, valves, fittings, supports, drainage and access, in accordance with:

- Drawing 2501141-001-05-LA-0004, sheet 01, rev 01: *Stellenbosch Municipality – PRV Chamber and Installation, Typical Detail* (VST Consulting Engineers);
- Drawing 7515-VC223: "Screw Lid" manhole access unit;
- Drawing 7515-VC222: stainless steel ladder and air vent.

The drawing is a typical detail (400NB example). Final sizes and pressure classes are as per the contract-specific design and to be a DN150 PN16 PRV.

PS 13.10.2 Standards

Work shall comply with SANS 1200 A, D, DB, G and L, and the general and particular notes on the drawing. Flanges to SANS 1123 (Tables 2500/3 and 1600/3 as scheduled), gate valves to SANS 664, steel pipe to SANS 719, galvanizing to SANS 121.

PS 13.10.3 Materials

Pipework, valves and fittings shall be as listed in the schedule of items 1 to 29 and 1A to 22A on the drawing. Named makes (Clayton, Bermad, Meinecke, VAG, Klamflex) or approved equal; submit data sheets for approval before ordering. Steel shall be epoxy lined and coated for potable water; support steelwork hot-dip galvanized.

PS 13.10.4 Construction

Chamber, thrust walls, pedestals, sump, drain, sleeves and pipe supports shall be constructed as shown on the drawing and the typical pipe support detail. Dimensions and reinforcement shall be verified on site and approved by the Engineer before construction.

PS 13.10.5 Testing and commissioning

Pressure test and disinfect to SANS 1200 L. Set the PRVs to the values in the PRV design settings table on the drawing, as completed by the designer. Submit as-builts and O&M manuals at handover.

PS 13.10.6 Measurement and payment.

The unit of measurement shall be the number (No.) of PRVs installed, and the tendered rate shall be inclusive of the PRV, Chamber and all required ancillary structures and fittings as well as reinstatement. Rates shall cover supply, delivery, installation, jointing, testing and all incidentals needed to complete the work.

**PS 13.11 Internal Isolating Valves**

To allow any fixture group to be isolated for maintenance without interrupting the others, the Contractor shall supply and install Class 16 full-bore ball valves with lockable or loose-key handles on the manifold of each ablution block and on each fixture group (cisterns, wash troughs and standpipes), four per block. The valves must be of a vandal-resistant pattern compatible with the multi-layer polycop piping.

The unit of measurement shall be the number (No.) of valves installed, and the tendered rate shall be inclusive of the connections to the piping.

PS 13.12 Cistern Angle Valves

The Contractor shall supply and install a 15mm chrome-plated brass angle valve with a loose-key or lock shield head and a braided flexible connector to each cistern, one per toilet and thirty in all, so that each toilet can be isolated individually without affecting the rest of the block.

The unit of measurement shall be the number (No.) of valves installed.

PS 13.13 Internal Fittings and Fixings

This specification covers the fittings, pipe clips, wall plates, sleeves and fixings needed to complete the internal water distribution in each ablution block, from the branch isolating valve to the cisterns, wash troughs and standpipes, in multi-layer polycop piping. The piping must be fixed at not more than 600mm centres and sleeved wherever it passes through concrete or masonry.

The unit of measurement shall be the sum per block, and the tendered rate shall be comprehensive and inclusive of all labour, plant, and materials required to complete the internal distribution.

PS 13.14 Operation and Maintenance Manuals, Spares, Labelling and Training

To ensure that the Municipality's operating staff can operate and maintain the new infrastructure, the Contractor shall provide two hard copies and an electronic copy of the operation and maintenance manuals for the pressure reducing valve station and the potable water system, together with a valve schedule, a list of recommended spares, permanent engraved labels on every valve and item of equipment, and a half-day training session on site for the Municipality's operating staff before the works are handed over.

The unit of measurement shall be the sum, and the tendered rate shall be inclusive of the manuals, schedules, labels and training.



PS 13.15 Bulk Water Meter at the Reservoir Connection (Provisional)

This specification covers the provisional allowance for a bulk water meter installation at the reservoir connection, should the Municipality require the supply to the development to be metered at the reservoir. The installation shall comprise the meter, isolating fittings, straight lengths and a chamber to standard drawings SW11 and SW12, with pulse or data provision where required. This item shall not be at the Contractor's sole discretion and shall only be expended on the Engineer's instruction. Payment for this item shall be made under Section 6, Part PF of the Bill of Quantities, where it has been allowed for as a Provisional Sum.

PS.14 Concrete Cubicles

PS 14.1 Lockable Rotomolded Polyethylene Doors

To complete the cubicle enclosures, the Contractor shall supply and install lockable rotomolded polyethylene doors as per drawing 2501141-001-05-LA-0002. These doors must be highly durable, impact-resistant, and impervious to moisture. They are to be hung utilizing heavy-duty, vandal-resistant commercial hinges that are securely anchored directly into the precast concrete panels, complete with robust internal locking mechanisms.

PS 14.2 Standard Precast Wall Panels

This specification encompasses the comprehensive requirements for the manufacturing, supply, handling, and erection of all precast concrete members required to construct the top structure toilet cubicles. The precast modular system must be securely assembled to provide a robust, vandal-resistant, and weather-tight enclosure. The Contractor must supply and install standard precast wall panels as per drawing 2501141-001-05-LA-0002 to form the solid vertical partitions. All wall panels must be cast with a dense, smooth finish on the interior faces to maintain highly sanitary and easily cleanable conditions.

PS 14.3 Precast Wall Panels (Sewer Outlet Opening)

Specific precast wall panels must be supplied and installed that are formed with an opening for a sewer outlet as per drawing 2501141-001-05-LA-0002. These must be manufactured with pre-formed openings near the base to neatly accommodate the 110mm sewer outlet pipes without requiring destructive breaking on site.

PS 14.4 Precast Wall Panels (Ventilation Openings)

The Contractor must supply and install precast wall panels formed with ventilation openings as per drawing 2501141-001-05-LA-0002. These panels must feature designated high-level openings to facilitate essential natural ventilation for the cubicle enclosures.



PS 14.5 Precast Floor Panels

The base of the top structure requires the supply and installation of precast concrete floor panels as per drawing 2501141-001-05-LA-0002. These floor panels must be manufactured with a textured, non-slip surface finish to ensure user safety, particularly in wet conditions. During installation, these floor panels must be accurately levelled and securely bedded onto the in-situ foundation slabs, ensuring an even load distribution and a stable platform for the vertical members.

PS 14.6 Precast Roof Panels

To enclose the structures, the Contractor shall supply and install precast concrete roof panels as per drawing 2501141-001-05-LA-0002. These roof members must be detailed to provide adequate falls for stormwater shedding and must be securely bolted to the vertical wall panels to resist wind uplift and prevent unauthorized removal. The joints between the roof panels and the wall panels, as well as all vertical joints between adjoining wall panels, must be properly sealed with an approved heavy-duty, UV-resistant polyurethane sealant to ensure a completely watertight top structure.

PS.15 Retaining Structures

This specification dictates the construction requirements for the site boundary walls and localized retaining elements. The Contractor shall supply all necessary materials for and construct the 1.5 m high 220 mm brick enclosure wall to each ablution block in NFX bricks set in Class II mortar with brickforce, plastered both sides, in accordance with drawing 2501141-001-05-LA-0002. The 200 mm block retaining walls are specified under PS.17. To ensure the structural integrity of the walls, the Contractor must incorporate SABS-approved galvanized brick force, which is to be laid in every second course of the enclosure wall brickwork.

Following the adequate curing of the mortar and structural concrete components, the Contractor is required to execute the backfilling operations behind the constructed walls. This backfill material must be placed in controlled 150mm layers and compacted to a minimum of 93% Modified AASHTO density to prevent settlement, avoid scouring, and ensure the long-term stability of the wall structure.

PS.17 BLOCK RETAINING WALLS

PS 17.1 200mm Block Retaining Walls

This specification dictates the construction requirements for the retaining walls at the platform edges. The Contractor shall construct the walls in 200mm hollow concrete blocks of a minimum compressive strength of 7 MPa, laid in Class II mortar, with Y12 starter bars at 200mm centres projecting from the footing, the cores filled with 20 MPa concrete, and a filled column at not more than 2m centres. To ensure the structural integrity of the walls, SABS-approved galvanized brickforce must be laid in every course. The walls must be plastered both sides to a minimum thickness of 12mm, with a waterproofed plaster and a



250 micron damp-proof membrane on the retained face, all in strict accordance with Option 1 on drawing 2501141-001-05-LA-0003. The retained height shall not exceed 1.0m, the maximum on this project being 0.84m. Weep holes must be formed where shown, and the walls must be cured for seven days before they are backfilled.

The unit of measurement shall be the square meter of wall face, measured from the top of the footing to the top of the wall, and the tendered rate shall be inclusive of the blocks, mortar, starter bars, core filling, columns, brickforce, plaster, membrane and weep holes.

PS 17.2 Retaining Wall Footings

This specification covers the footings for the block retaining walls, which shall be 800mm wide by 300mm deep in Grade 25/19 concrete on 50mm concrete blinding, reinforced with four Y12 bars top and bottom and Y12 stirrups at 250mm centres, with the Y12 starter bars cast in as per drawing 2501141-001-05-LA-0003. The footings must be founded not less than 300mm below finished ground on the low side and on ground approved by the Engineer, and the founding conditions must be inspected and approved by the Engineer before the concrete is cast.

The unit of measurement shall be the cubic meter of footing concrete, and the tendered rate shall be inclusive of excavation, blinding, formwork, starter bars and curing.

PS 17.3 Free-Draining Backfill Zone

To prevent water pressure from building up behind the cut-side retaining walls, a free-draining zone of 19mm crushed stone, 300mm wide, must be placed against the retained face for the full height of the wall. The stone must be wrapped in U14 Bidim or an approved equal geotextile with laps of not less than 500mm, and connected at its base to the subsoil drain specified in PS.10. The remaining backfill shall be placed and compacted in accordance with PS.15.

The unit of measurement shall be the cubic metre of stone placed, and the tendered rate shall be inclusive of the geotextile and its laps.



STANDARD SPECIFICATIONS

The Specifications on which this contract is based are the Stellenbosch Municipality's Standard Engineering Specifications (hereafter referred to as the Standard Engineering Specifications). This document is obtainable separately, and Tenderers shall obtain their own copies of the applicable Sections.

Section	Description	Date of Issue	
A	Procedures for the provision of civil engineering services for new developments	June	2015
B	Design guidelines and minimum standards for water reticulation	June	2015
C	Design guidelines and minimum standards for sewer drainage	June	2015
D	Design guidelines and minimum standards for stormwater drainage	June	2015
E	Design guidelines and minimum standards for roads	June	2015
F	Design guidelines and minimum standards for solid waste management	June	2015
G	Standard details	June	2015

PARTICULAR SPECIFICATIONS

In addition to the Standardized and Project Specifications the following Particular Specifications / Policies shall apply to this contract:

OHSA 1993 Safety Specification
(26 Pages)

Standard Environmental Management Plan for Civil Engineering Construction Works
(24 Pages)



CONTRACT AND STANDARD DRAWINGS

CONTRACT DRAWINGS / DETAILS

<u>DRAWING INDEX</u>				
	NO	DRAWING TYPE	DRAWING NO	REV
	A	SITE LAYOUT		
	1	Sheet 1 of 1	2501141-001-05-LA-0001	03
	B	TYPICAL DETAILS		
	1	Sheet 1 of 1	2501141-001-05-LA-0002	02
	1	Sheet 1 of 1	2501141-001-05-LA-0003	01
	1	Sheet 1 of 1	2501141-001-05-LA-0004	01
	C	LONGITUDINAL SECTIONS		
	1	Sheet 1 of 1	2501141-001-05-DE-0005	01
	1	Sheet 1 of 1	2501141-001-05-DE-0006	01

STANDARD DRAWINGS

The Stellenbosch Standard Drawings to which these Standard Engineering Specifications refer are attached in Annexure C.

GENERAL

SG1 PROJECT NAME BOARD
 SG2 TYPICAL LAYOUT OF SERVICES IN 20m ROAD RESERVE
 SG3 TYPICAL LAYOUT OF SERVICES IN 16m ROAD RESERVE
 SG4 TYPICAL LAYOUT OF SERVICES IN 13m ROAD RESERVE
 SG5 TYPICAL LAYOUT OF SERVICES IN 10m ROAD RESERVE
 SG6 SERVICES MARKINGS
 SG7 ROUTE, VALVE AND HYDRANT MARKERS OUTSIDE ROAD RESERVES OR TOO FAR FROM KERBS

WATER

SW1 VALVE CHAMBER
 SW2 FIRE HYDRANT CHAMBER
 SW3 SCOUR VALVE CHAMBER
 SW4 SINGLE AIR VALVE CHAMBER
 SW5 THRUST BLOCK FOR 90° BENDS
 SW6 THRUST BLOCK FOR TEES
 SW7 THRUST BLOCK FOR 45° BENDS
 SW8 THRUST BLOCK FOR ENDCAPS, 11¼° AND 22½° BENDS
 SW9 TYPICAL ERF CONNECTION: PLAN
 SW10 TYPICAL ERF CONNECTION: SECTION
 SW11 TYPICAL BULK WATER METER CHAMBER (1 OF 2)
 SW12 TYPICAL BULK WATER METER CHAMBER (2 OF 2)
 SW13 CORROSION PROTECTION FOR FLANGES
 SW14 LOCKING BAR DETAIL



SEWER

- SS1 SEWER MANHOLE: FIBRE CEMENT
- SS2 SEWER MANHOLE: PRECAST CONCRETE
- SS3 SEWER MANHOLE: BRICK – PLAN (1 OF 3)
- SS4 SEWER MANHOLE: BRICK - SECTION BB (2 OF 3)
- SS5 SEWER MANHOLE: BRICK - SECTION CC (3 OF 3)
- SS6 BRICK MANHOLE FOR SHALLOW SEWERS
- SS7 SEWER MANHOLE WITH BACKDROP: TYPE 1
- SS8 SEWER MANHOLE WITH BACKDROP: TYPE 2
- SS9 SEWER MANHOLE WITH BACKDROP: TYPE 3: INTERNAL BACKDROP
- SS10 SEWER ERF CONNECTION LAYOUT
- SS11 SEWER ERF CONNECTION: TYPE 1
- SS12 SEWER ERF CONNECTION: TYPE 2
- SS13 SEWER ERF CONNECTION: TYPE 3
- SS14 MARKER POST FOR SEWER ERF CONNECTION
- SS15 RODDING EYE
- SS16 OIL/PETROL INTERCEPTING TRAP



18. PRE-QUALIFICATION SCORE SHEET

P.19.1 Eligibility

P.19.1.1 Bidders must provide a list of the bidder's past work experience in terms of similar projects successfully completed. The value and scale of the projects indicated for these purposes must be supplied together with other relevant information.

- For the sewer, water networks, and construction of ablution facilities works, a minimum of 3 projects completed in the past 5 years or currently in construction, with a minimum contract sum of R4 million, including VAT, must be provided.
- Contactable references must be clearly provided. A reference check will be done during the evaluation of the tenders.

P.19.1.2 The tenderer shall submit, a bank rating letter issued by a registered South African financial institution. The letter shall:

- Be issued not more than three (3) months prior to the tender closing date;
- Confirm the duration of the banking relationship;
- Confirm that the account is conducted in a satisfactory manner; and
- Be signed by an authorised representative of the financial institution.

Failure to submit the required bank rating letter will render the tender non-responsive.

P.19.1.3 The work required in terms of this project is considered to require specific experience and expertise and it is essential that suitably qualified and experienced personnel be assigned to this project. It would be extremely advantageous if the key personnel to be directly involved with this contract have relevant experience related to similar successfully completed projects and particular fields of specialization.

Bidders must provide CVs for the key personnel identified for each listed position to point out similar successfully completed projects and experience that is relevant to this project for each of the key personnel indicated:

- **Construction Manager (Site Agent):** Must have a National Diploma or equivalent qualification in the Built environment or Project Management, and more than 5 years' experience in similar civil or building projects. The Construction Manager must be full-time on site for the duration of the construction.
- **Occupational Health and Safety Officer:** To have a minimum NQF 5 in Occupational Health and Safety or equivalent qualification, complete with professional registration as a Construction Health and Safety Officer with the South African Council for the Project and Construction Management Professions or South African Institute of Occupational Safety and Health (SAIOSH).

P.19.1.4 Returnable Requirements for Key Personnel:

- Tenderers shall attach certified copies of all relevant qualifications of the tendered key personnel, a Curriculum Vitae (signed by the person as a true reflection of experience).

Notes on Qualifications and Personnel:

- A degree is qualified as a 3 or 4-year degree in the relevant discipline at a registered higher university.
- A diploma is qualified as a 3- or 4-year national diploma in a relevant discipline obtained from a registered University or Technicon.
- The experience must be specific to similar projects (water, sanitation, construction of ablution facilities).
- One person only to qualify for each listed position. The key personnel to be used in this regard will be subject to the approval of the Employer Agent prior to the commencement date of the contract. Should any of the persons identified in the returnable schedules not be available for the position which they are indicated for, then a suitable candidate with equal



or superior tertiary qualification and/or relevant experience than that of the person which he/she replaces shall be used for every such position.

P.19.2 Local Labour Procurement Requirements

P.19.2.1 Mandatory Use of Local Unskilled Labour

In alignment with municipal development objectives and social upliftment policies, it is a mandatory requirement of this contract that 100% of unskilled labour employed for the execution of the works must be sourced from within the local municipality where the project is located.

P.19.2.2 Definition of Local and Unskilled Labour

- **Local Labour** refers to individuals who are residents of the municipality, preferably residing within the ward(s) or immediate vicinity of the project site. Proof of residence (such as municipal utility bills, signed affidavits, or letters from ward councillors) may be required to verify local status.
- **Unskilled Labour** includes roles that do not require formal training, certification, or trade qualifications. Examples include general labourers, cleaners, flag personnel, and site maintenance staff.

P.19.2.3 Contractor Responsibilities The appointed contractor shall:

- Prepare and submit a Local Labour Procurement Plan for approval prior to commencement of works.
- Liaise with the local municipality, ward councillors, or community liaison officers (CLOs) to identify and recruit suitable candidates.
- Ensure fair and transparent selection and recruitment processes.
- Maintain accurate records of all locally employed unskilled labour, including identification and proof of residence.
- Include in monthly reports a breakdown of local labour usage, including hours worked, remuneration, and roles performed.

P.19.2.4 Non-Compliance Failure to comply with this requirement will be deemed a material breach of contract. The municipality reserves the right to take corrective action, which may include but is not limited to:

- Issuing of warnings or instructions for immediate rectification;
- Withholding of progress payments;
- Termination of the contract in the event of persistent non-compliance.



19. SCHEDULE OF PLANT AND EQUIPMENT

The following are lists of major items of relevant equipment that I/we **presently** own or lease and will have available for this contract or will acquire or hire for this contract if my / our tender is accepted.

DETAILS OF MAJOR EQUIPMENT THAT IS OWNED BY AND IMMEDIATELY AVAILABLE FOR THIS CONTRACT.			
QUANTITY	DESCRIPTION	SIZE	CAPACITY

Attach additional pages if more space is required.

DETAIL OF MAJOR EQUIPMENT THAT WILL BE HIRED, OR ACQUIRED FOR THIS CONTRACT IF MY / OUR TENDER IS ACCEPTED.			
QUANTITY	DESCRIPTION,	SIZE	CAPACITY

Attach additional pages if more space is required.

Number of sheets appended by the tenderer to this schedule (<i>If nil, enter NIL</i>)			
SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



20. SCHEDULE OF SUBCONTRACTORS

I/we the tenderer, notify the Stellenbosch Municipality that it is our intention to employ the following Subcontractors for work in this contract.

SUBCONTRACTORS				
Category / Type	Subcontractor Name; Address; Contact Person; Tel. No.		Items of work (pay items) to be undertaken by the Subcontractor	Estimated cost of Work (Rand)
1.	Name of firm			
	Contact person			
	Tel No			
	Address			
2.	Name of firm			
	Contact person			
	Tel No			
	Address			
3.	Name of firm			
	Contact person			
	Tel No			
	Address			
4.	Name of firm			
	Contact person			
	Tel No			
	Address			
5.	Name of firm			
	Contact person			
	Tel No			
	Address			
Number of sheets appended by the tenderer to this schedule (<i>If nil, enter NIL</i>)				

Acceptance of this tender shall not be construed as approval of all or any of the listed subcontractors. Should any of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a subcontractor not listed above being approved by the Engineer.

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



21. SCHEDULE OF WORK EXPERIENCE OF THE TENDERER – CURRENT CONTRACTS

EMPLOYER (Name, Tel, Email)		NATURE OF WORK	VALUE OF WORK (INCL. VAT)	CONTRACT PERIOD
Company				From
Tel				
Contact Person				To
Email				
Company				From
Tel				
Contact Person				To
Company				
Company				From
Tel				
Contact Person				To
Email				
Company				From
Tel				
Contact Person				To
Email				
Company				From
Tel				
Contact Person				To
Email				
Company				From
Tel				
Contact Person				To
Email				
Company				From
Tel				
Contact Person				To
Email				

Attach additional pages if more space is required.

Number of sheets appended by the tenderer to this schedule (If nil, enter NIL)			
SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



22. SCHEDULE OF WORK EXPERIENCE OF THE TENDERER – COMPLETED CONTRACTS

The following is a statement of similar work successfully executed by myself / ourselves:

EMPLOYER (Name, Tel, Fax, Email)		NATURE OF WORK	VALUE OF WORK (INCL. VAT)	CONTRACT PERIOD
Company				From
Tel				
Contact Person				To
Email				
Company				From
Tel				
Contact Person				To
Email				
Company				From
Tel				
Contact Person				To
Email				
Company				From
Tel				
Contact Person				To
Email				
Company				From
Tel				
Contact Person				To
Email				
Company				From
Tel				
Contact Person				To
Email				

Attach additional pages if more space is required.

Number of sheets appended by the tenderer to this schedule (If nil, enter NIL)	
--	--

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



23. CERTIFICATE OF REGISTRATION WITH CIDB

CIDB Contractor Registration Certificate

A Certificate of Contractors Registration issued by the Construction Industry Development Board (CIDB) shall be attached to this schedule.

Where a tenderer satisfies CIDB Contractor Grading designation requirements through joint venture formation, such tenderers must submit the Certificates of Contractor Registration in respect of each partner.

Number of sheets appended by the tenderer to this schedule (If nil, enter NIL)		
CRS Number:		

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



24. FORM OF OFFER AND ACCEPTANCE

NOTE:

1. This form must be completed in duplicate by both the successful bidder (Part 1) and the purchaser (Part 2). Both forms must be signed in the original so that the successful bidder and the purchaser will be in possession of originally signed contracts for their respective records.
2. NO correction fluid/tape may be used.
 - a. In the event of a mistake having been made, it shall be crossed out in ink and be accompanied by an initial at each and every alteration.
3. The Bidder **MUST** indicate whether he/she/the entity is a registered VAT Vendor or not.
 - a. In the case of the Bidder not being a registered VAT Vendor, both columns (amount/rate excluding AND including VAT) must reflect the same amount.

	INDICATE WITH AN 'X'							
Are you/is the firm a registered VAT Vendor	YES				NO			
If "YES", please provide VAT number								

1. OFFER

- 1.1. The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works: **B/SM: 28/27**
- 1.2. The tenderer, identified in the Offer signature block, has examined the draft contract as listed in the Acceptance section and agreed to provide this Offer.
- 1.3. By the representative of the Tenderer, deemed to be duly authorized, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the **Employer** under the contract, including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the Contract Data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VAT IS:

In figures:	R	
In words:		

- 1.4. This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the **Contractor** in the conditions of contract identified in the Contract Data.

Signature(s)		
Name(s)		
Capacity		
Name of tenderer:		
Name of witness:	<i>(Insert name and address of organisation)</i>	Date
Signature of witness:		



2. ACCEPTANCE

- 2.1. By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the conditions of contract identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the Employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.
- 2.2. Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.
- 2.3. It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

Signature(s):		
Name(s):		
Capacity:		
For the Employer:	Stellenbosch Municipality, Plein Street, Stellenbosch	
Name of witness:		Date:
Signature of witness:		



25. PRICING SCHEDULE

NOTE:

1. Only firm prices will be accepted. Non-firm prices will not be considered.
2. All delivery costs **MUST** be included in the bid price, for delivery at the prescribed destination.
3. Document **MUST** be completed in non-erasable black ink.
4. **NO** correction fluid/tape may be used.
 - a. In the event of a mistake having been made, it shall be crossed out in ink and be accompanied by an initial at each and every alteration.
5. The Bidder **MUST** indicate whether he/she/the entity is a registered VAT Vendor or not.

I / We _____

(full name of Bidder) the undersigned in my capacity as _____

of the firm _____

hereby offer to Stellenbosch Municipality to render the services as described, in accordance with the specification and conditions of contract to the entire satisfaction of the Stellenbosch Municipality and subject to the conditions of tender, for the amounts indicated hereunder:

	INDICATE WITH AN 'X'							
	YES				NO			
Are you/is the firm a registered VAT Vendor								
If "YES", please provide VAT number								

Please note the following:

1. Stellenbosch Municipality reserves the right to adjust the scope of work/ quantity required to stay within its budget.
2. Only firm prices will be accepted and non-firm prices will not be considered.

PRICING SCHEDULE:

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



<u>SECTION</u>	<u>DESCRIPTION</u>	<u>AMOUNT</u>
Section 1	Preliminary and general	R
Section 2	Site clearance	R
Section 3	Platforms	R
Section 4	Foundation slabs	R
Section 5	Sewerage	R
Section 6	Water reticulation	R
Section 7	Top structures	R
Sub Total 'A'		R -
Contingencies Add 10% of Subtotal 'A'		R -
Sub Total 'B'		R -
VALUE ADDED TAX (15%) of Sub-Total 'B'		R -
TOTAL		R -
TOTAL CARRIED TO FORM OF OFFER		

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



<u>SUB-SECTION SUMMARY</u>			
1	PRELIMINARY AND GENERAL		R -
	AB GENERAL SPECIFICATIONS	R -	
	AH OCCUPATIONAL HEALTH and SAFETY	R -	
2	SITE CLEARANCE		R -
	B SITE CLEARANCE	R -	
3	PLATFORMS		R -
	DA EARTHWORKS : BULK	R -	
4	FOUNDATION SLABS		R -
	C CONCRETE WORK	R -	
5	SEWERAGE		R -
	DB EARTHWORKS FOR PIPE TRENCHES	R -	
	PG NON PRESSURE PIPELINES and PC CULVERTS	R -	
	PH MANHOLES and APPURTENANT DRAINAGE WORKS	R -	
6	WATER RETICULATION		R -
	DB EARTHWORKS FOR PIPE TRENCHES	R -	
	PF PRESSURE PIPELINES : OTHER THAN STEEL	R -	
7	TOP STRUCTURES		R -
	C CONCRETE WORK	R -	
	SUB TOTAL A		R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



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SECTION 1 PRELIMINARY AND GENERAL						
PART AB GENERAL SPECIFICATIONS						
Item	Clause	Description	Unit	Quantity	Rate	Amount
FIXED CHARGES						
1	GCC.2025/ SANS 1921-1	Formal contract	sum	1		R -
2	GCC.2025	Sureties	sum	1		R -
3	GCC.2025	Checking of underground services	sum	1		R -
4	GCC.2025	Insurance of works, etc. and damage to persons and property	sum	1		R -
5	GCC.2025	Third Party Insurance	sum	1		R -
6	GCC.2025	Workman's compensation	sum	1		R -
7	A.8.4.2.2	Initial supply of plant, materials, labour and services required by the contractor	sum	1		R -
8	A.8.4.2.2	Offices for Engineer and staff (Type 1)	sum	1		R -
9	AA.8.3.2	Contractors' camp site / store yard	sum	1		R -
10	A.8.3.2	Notice board	sum	2		R -
11	GCC.2025	Protection of underground services	PC Sum	1	R 5 000.00	R 5 000.00
12	PS.1.1	Extra over for proving existing underground services by hand excavation	PC Sum	1	R 5 000.00	R 5 000.00
13	PS.1.2	Extra over for relocating existing underground services	PC Sum	1	R 5 000.00	R 5 000.00
TIME RELATED ITEMS						
14	SANS 1921-1	Preliminary and General : Time Related	sum	1		R -
15	GCC.2025	Setting out	sum	1		R -
16		Provision of plant, materials and labour	sum	1		R -
17	GCC.2025	Clearance of site during contract and on completion	sum	1		R -
18		Cost of Samples and Contractor's Preliminary and Site Control Testing	sum	1		R -
19	PS.2	Provisions for quality control testing	PC Sum	1	R 15 000.00	R 15 000.00
20		Attendance on and maintenance of office for Engineer and staff	sum	1		R -
21		Rental of telephone for Engineer's office including payment of telephone calls	PR Sum	1	R 6 000.00	R 6 000.00
22	PS.3.1	Survey for, and Preparation of, 'As-Built' Drawings	sum	1		R -
23		b) Community Liaison Officers (1 x 3 months)	PC Sum	1	R 50 000.00	R 50 000.00
24		c) % Profit and attendance on item 23	%	R50 000.00		R -
Part continued on next page						

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



Part continued		PART AB GENERAL SPECIFICATIONS				
Item	Clause	Description	Unit	Quantity	Rate	Amount
25	PS.4	Compliance with occupational health and safety act	sum	1		R -
26	PS.5.1	Security on site by contractor	sum	1		R -
27	PS.5.2	Provision for security on site to guard against any disruption of the works throughout the duration of the contract (Provisional Sum) As directed by the	PR Sum	1	R 10 000.00	R 10 000.00
		PROVISION				
28	PS.3.2	Provision for additional Survey as instructed by the engineer	sum	1		R -
29	PS.6	Provision of Social Facilitator and management and coordination	sum	1		R -
30	PS.8	Provision for a geotechnical investigation of the ablution block sites (Provisional Sum) As directed by the engineer	PR Sum	1	R 150 000.00	R 150 000.00
TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL						R -
		PART AH OCCUPATIONAL HEALTH and SAFETY				
Item	Clause	Description	Unit	Quantity	Rate	Amount
1	AH.14.1	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	sum	1		R -
2	AH.14.1	Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	sum	1		R -
3	AH.14.1	Submission of the Health and Safety File	sum	1		R -
TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL						R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



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		SECTION 2 SITE CLEARANCE				
		PART B SITE CLEARANCE				
Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C.8.2.1	General clearance and grubbing	m2	500		R -
2	C.8.2.2 PS.11	Removal of large trees of girth > 1,5	no.	20		R -
3	PS.7	Removal of roadways, sidewalks and/or medians (inclusive of Concrete, asphalt, gravel and/or stabilised gravel) and spoil off site	m3	10		R -
4	C.8.2.8	Relocation of Existing Structures	PC Sum	1	R 10 000.00	R 10 000.00
TOTAL CARRIED TO SECTION 2 SUMMARY: SITE CLEARANCE						R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



SECTION 3 PLATFORMS						
PART DA EARTHWORKS: BULK						
Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.3.1.2-PS.7	Excavate 150mm topsoil under platforms to stockpile	m3	40		R -
2	DA.8.3.1.3	Excavate unsuitable material for foundations to spoil (Provisional)	m3	50		R -
3	DA.8.3.2	Excavate platform cut in all materials and dispose to spoil (in-situ G9 to G10 material, not suitable as platform fill)	m3	20		R -
4	DA.8.4.1	Extra over excavation for hard material (Provisional)	m3	10		R -
5	DA.8.4.2	Extra over excavation for intermediate material (Provisional)	m3	20		R -
6	PS.9.1	Import G6 material from contractor's offsite or commercial source inclusive of haulage and royalties	m3	50		R -
7	PS.9.2	Compact G6 material to 95% Mod. AASHTO	m3	50		R -
8	PS.10	110 mm slotted uPVC sub-soil drain in a 300 mm wide x 450 mm deep 19 mm crushed stone surround, wrapped in U14 Bidim or similar approved geofabric, behind the cut-side retaining walls. Inclusive of all labour, plant and materials.	m	50		R -
TOTAL CARRIED TO SECTION 3 SUMMARY: PLATFORMS						R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



		SECTION 4 FOUNDATION SLABS				
		PART C CONCRETE WORK				
Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DD.8.3.2	Excavate for foundation beams to spoil (raft 9.24 m x 5.84 m per block, ablution drawing)	m3	25		R -
2	GA.8.4.1	Grade 30/26 concrete in beams and sump (Beam 1 and Beam 2, 300 x 350 mm; sand trap 1.2 m3 per block)	m3	20		R -
3	G.8.2	Shutter exposed side (Class 3 - Smooth)	m2	45		R -
4	G.8.2.1	Damp Proof Membrane - 250 micron	m2	180		R -
5	PS.11	Grade 30/26 concrete in 100mm thick slabs with wood floated finish including supply and application of approved weed killer (raft 9.24 m x 5.84 m per block)	m3	20		R -
6	GA.8.4.1	Grade 20/26 concrete for blinding	m3	9		R -
7	G.8.3.1	High tensile steel fabric reinforcement ref: 193	t	0.75		R -
8	G.8.3.2	High tensile steel reinforcement (4 Y12 per beam, bending schedule on the ablution drawing)	t	0.75		R -
9	G.8.3.3	Mild steel reinforcement (R8 links at 350 mm centres)	t	0.2		R -
TOTAL CARRIED TO SECTION 4 SUMMARY: CONCRETE WORK						R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



SECTION 5 SEWERAGE						
PART DB EARTHWORKS FOR PIPE TRENCHES						
Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DB.8.3.2	Excavate, backfill and lay in all material 110mm dia. sewer connection from the pans to the rodding eye. Depth 0,0m - 1,0m	m	55		R -
2	DB.8.3.2	Excavate, backfill and lay in all material 110mm dia. sewer branches S2 and S3 from the rodding eye to the collector. Depth 1,0m - 2,0m	m	35		R -
3	DB.8.3.2	Excavate and backfill in all material for 160 mm diameter pipe where depth is :- Over 1,0 m and not exceeding 2,0 m	m	350		R -
4	DB.8.3.2	Excavate and backfill in all material for 160 mm diameter pipe where depth is :- Over 2,0 m and not exceeding 3,0 m	m	15		R -
5	DB.8.3.2	Extra over for hard excavation (5% of the trench excavation volume, AECOM 2020 recommendation)	m3	20		R -
6	LB.8.2.1	Placing and compacting of Class B selected granular bedding (SANS 1200 LB) for 110 mm dia. pipe	m	100		R -
7	LB.8.2.1	Placing and compacting of Class B selected granular bedding (SANS 1200 LB) for 160 mm dia. pipe	m	350		R -
TOTAL CARRIED TO SECTION 5 SUMMARY: SEWERAGE						R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



		<u>PART</u>	PG NON PRESSURE PIPELINES and PC CULVERTS			
Item	Clause	Description	Unit	Quantity	Rate	Amount
1	LD.8.2.6	Supply and lay 110 mm diameter HD uPVC Class 34 pipe complying with SANS 791	m	100		R -
2	LD.8.2.6	Supply and install equal tees on 110mm dia. HD uPVC pipe	no.	30		R -
3	LD.8.2.6	Supply and install property terminal connection to detail, inclusive of concrete, junctions, rodding eye and endcap with slab.	no.	3		R -
4	LD.8.2.6	Supply and install 160mm dia. To 110mm dia. HD uPVC taper reducer pipe fitting.	no.	3		R -
5	LD.8.2.6	Supply and lay 160 mm diameter HD uPVC (class 34)	m	350		R -
6	LD.8.2.6	Supply and install 50 mm nominal uPVC soil, waste and vent pipe and fittings to SANS 967 from the wash troughs to the sand trap in each block (ablution drawing Section C-C)	m	30		R -
TOTAL CARRIED TO SECTION 5 SUMMARY: SEWERAGE						R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



		PART	PH MANHOLES and APPURTENANT DRAINAGE WORKS			
Item	Clause	Description	Unit	Quantity	Rate	Amount
1	LD.8.2.3	Standard precast class A concrete ring manhole. Light duty cover and frame - Over 0 m and not exceeding 1,5 m.	no.	8		R -
2	LD.8.2.3	Standard precast class A concrete ring manhole. Light duty cover and frame - Over 1,5 m and not exceeding 2,0 m.	no.	4		R -
3	LD.8.2.4	E.O. items 1-2 for change in direction to manhole benching for 160 pipe	no.	9		R -
4	LD.8.2.4	E.O. items 1-2 for 160mm junction in manhole benching	no.	2		R -
5	LD.8.2.4	E.O. items 1-2 for SANS 50124 cover and frame: class D400 where vehicle loading is possible, B125 elsewhere	no.	12		R -
6	PS.12.1	Supply and install precast concrete Sand Trap lids 550 x 950 x 50mm.	no.	3		R -
7	PS.12.2	Supply and install concrete drainage gully and W1 channel connection at the standpipe area of each block, discharging to the sand trap (ablution drawing Section C-C)	no.	3		R -
8	PS.12.3	Supply and install cistern toilets	no.	30		R -
9		Reinforced concrete anchor blocks on sewer sections steeper than 1:10 (247.3 m steep length, blocks at 6 m centres)	no.	42		R -
10	LD.8.2.11 PS.12.4	Break into existing concrete manhole wall for [100-400] mm diameter pipe and make good	sum	1		R -
11	PS.12.5	Air or water testing of gravity sewers and manholes, flushing, CCTV inspection and deflection testing of the complete network	m	380		R -
TOTAL CARRIED TO SECTION 5 SUMMARY: SEWERAGE						R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



SECTION 6 WATER RETICULATION						
PART DB EARTHWORKS FOR PIPE TRENCHES						
Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DB.8.3.2	Excavate and backfill in all material for 75mm dia. pipe Depth is over 1.0m and not exceeding 2.0m and spoil excess material of site	m	40		R -
2	DB.8.3.2	Excavate and backfill in all material for 160mm dia. pipe Depth is over 1.0m and not exceeding 2.0m and spoil excess material of site	m	700		R -
3	DB.8.3.2	Extra over items 1-2 for hard excavation	m3	27		R -
4	DB.8.3.2	Extra over items 1-2 for intermediate excavation	m3	5		R -
5	LB.8.2.1	Placing and compacting flexible pipe bedding to 75mm dia HDPE pipes	m	40		R -
6	LB.8.2.1	Placing and compacting flexible pipe bedding to 160mm dia HDPE PE100 pipe	m	700		R -
7	PS.13.4	Supply and install detectable warning tape and corrosion-resistant tracer wire over the PE pipelines, including accessible continuity test points and continuity testing	m	707.8		R -
8	PS.13.5	Provisional allowance for trench shoring, dewatering, safe access and protection in restricted or unstable excavations, as instructed and measured	PR Sum	1	R 20 000.00	R 20 000.00
9	PS.13.6	Provisional allowance for existing-service crossings, sleeves, concrete protection and special reinstatement not covered by the trench rates	PR Sum	1	R 15 000.00	R 15 000.00
TOTAL CARRIED TO SECTION 6 SUMMARY: WATER RETICULATION						R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



		<u>PART</u>	PF PRESSURE PIPELINES : OTHER THAN STEEL				
Item	Clause	Description	Unit	Quantity	Rate	Amount	
		<u>ALL MATERIALS WILL BE SUPPLIED AND INSTALLED BY CONTRACTOR AS PER STELLENBOSCH SPECIFICATION</u>					
1		20 mm and 15 mm Class 16 internal cold-water pipe to the standpipes, wash troughs and cisterns	m	50		R -	
2		25 mm Class 16 internal manifold along the central service zone of each block	m	30		R -	
3		75mm OD HDPE PE100 PN16 branch pipelines W2, W3 and W4, including fusion joints	m	40		R -	
4		160mm OD HDPE PE100 PN16 blue-striped bulk main from the Khayamandi Reservoir, including fusion joints	m	700		R -	
5		160mm PE100 PN16 bends (seven 45, two 22.5 and one 11.25 degree) as shown on the long section, including fusion and joint records	no.	10		R -	
6		25mm x 20mm reducer	no.	3		R -	
7		75mm x 25mm reducer	no.	3		R -	
8		160mm x 75mm PE100 PN16 branch tees / reducers complete with restrained connections (take-offs W4, W2 and W3)	no.	3		R -	
9		75mm end caps	no.	3		R -	
10		160mm PE100 dead-end cap	no.	1		R -	
11		75mm PN16 branch isolating valve installations	no.	3		R -	
12		DN150 PN16 flanged isolating valve installations upstream and downstream of the PRV, complete with operators and jointing materials	no.	2		R -	
13		Plasson saddle on 25mm dia. pipe for 20mm standpipe connection	no.	9		R -	
14		supply and install valve marker posts and set in concrete (Paint to be supplied by the contractor)	no.	4		R -	
14		Sterilisation of pipeline - All Dia. Pipeline	sum	1		R -	
15		Pressure test reticulation system at 1200 kPa (PN16 installation, accepted test sections, calibrated instruments and records)	sum	1		R -	
16		Grade 15/26 concrete to anchor/thrust blocks (Supply and construct by the contractor)	m3	15		R -	
18	PS.13.1	Supply and install 20mm stand pipes inclusive of all fittings	no.	9		R -	
		Part continued on next page					

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



Part continued		PART	PF PRESSURE PIPELINES : OTHER THAN STEEL				
19	PS.13.2	Supply and install concrete wash troughs on precast concrete pedestals as per drawing (2501141-001-05-LA-0002, Section C-C), including the pedestal, outlets, 15 mm stopcock and fixings; the pedestal is included in the rate for the trough	No.	9		R	-
20	PS.13.3	Supply and install plastic bib taps inclusive of all fittings	no.	18		R	-
21	PS.13.7	Connect into existing live mains supply	no.	1		R	-
24	PS.13.8	Fire hydrants complete with bend, valve, flange bolts and extension complete as per detail as per Drawing	no.	1		R	-
25	PS.13.9	Supply and install valve box with rings and cover complete to detail as per Drawing	no.	4		R	-
17	PS.13.10	Supply and install DN150 PN16 hydraulically operated pilot-controlled pressure reducing valve at chainage 540 m, set to 16.89 m (1.66 bar) downstream, complete including chamber and all required manufactures requirements as per PRV drawing	no.	1		R	-
33	PS.13.11	Internal isolating valves on the block manifold and fixture groups	no.	12		R	-
34	PS.13.12	Cistern angle valves	no.	30		R	-
35	PS.13.13	Internal fittings, pipe clips, sleeves and fixings per block	sum	3		R	-
38	PS.13.14	Operation and maintenance manuals, valve schedule, recommended spares, permanent labels and municipal operator training for the PRV station and potable-water system	sum	1		R	-
40	PS.13.15	Provisional bulk water meter installation at the reservoir connection, including meter, isolating fittings and data or pulse provision if required by the Municipality	PR Sum	1	R 25 000.00	R	25 000.00
TOTAL CARRIED TO SECTION 6 SUMMARY: WATER RETICULATION							R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



		SECTION 7 TOP STRUCTURES				
		PART C CONCRETE WORK				
Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.14.1	Supply and install lockable rotomolded polyethylene doors as per drawing (2501141-001-05-LA-0002)	No.	30		R -
2	PS.14.2	Supply and install standard precast wall panels as per drawing (2501141-001-05-LA-0002)	No.	90		R -
3	PS.14.3	Supply and install precast wall panels formed with opening for sewer outlet as per drawing (2501141-001-05-LA-0002)	No.	90		R -
4	PS.14.4	Supply and install precast wall panels formed with opening for ventilation openings as per drawing (2501141-001-05-LA-0002)	No.	90		R -
5	PS.14.5	Supply and install precast floor panels as per drawing (2501141-001-05-LA-0002)	No.	30		R -
6	PS.14.6	Supply and install precast roof panels as per drawing (2501141-001-05-LA-0002)	No.	30		R -
7	PS.15	Supply and construct 1.5m high 220 mm masonry enclosure wall to each ablution block, NFX Class 14 bricks in Class II mortar with brickforce, plastered both sides, as per drawing (2501141-001-05-LA-0002)	m2	130		R -
8	DM.8.33	Place and Compact Backfill behind the block retaining walls to 93% Mod. AASHTO	m3	40		R -
		Part continued on next page				

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



Part continued		PART C CONCRETE WORK				
10	PS.17.1	200 mm concrete block retaining wall, blocks of minimum 7 MPa compressive strength in Class II mortar, Y12 starter bars at 200 mm centres with the cores filled with 20 MPa concrete and a filled column at 2 m centres, galvanised brickforce in every course, plastered both sides (12 mm minimum) with a 250 micron damp-proof membrane on the retained face, retained height up to 1.0 m (retaining wall drawing 2501141-001-05-LA-0003, Option 1)	m2	50		R -
11	PS.17.2	25 MPa/19 mm concrete footing 800 mm x 300 mm on 50 mm concrete blinding to the block retaining walls, reinforced with 4 Y12 top and bottom and Y12 stirrups at 250 mm centres, including the Y12 starter bars (retaining wall drawing 2501141-001-05-LA-0003, Option 1)	m3	20		R -
12	PS.17.3	Free-draining crushed stone zone 300 mm wide behind the cut-side retaining walls, wrapped in geofabric	m3	20		R -
TOTAL CARRIED TO SECTION 7 SUMMARY: TOP STRUCTURES						R -

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			



26. DECLARATION BY TENDERER

I / We acknowledge that I / we am / are fully acquainted with the contents of the conditions of tender of this tender document and that I / we accept the conditions in all respects.

I / We agree that the laws of the Republic of South Africa shall be applicable to the contract resulting from the acceptance of *my / our tender and that I / we elect *domicillium citandi et executandi* (physical address at which legal proceedings may be instituted) in the Republic at:

I / We accept full responsibility for the proper execution and fulfillment of all obligations and conditions devolving in me / us under this agreement as the principal liable for the due fulfillment of this contract.

I / We furthermore confirm I / we satisfied myself / ourselves as to the corrections and validity of my / our tender; that the price quoted cover all the work / items specified in the tender documents and that the price(s) cover all my / our obligations under a resulting contract and that I / we accept that any mistake(s) regarding price and calculations will be at my / our risk.

I / We furthermore confirm that my / our offer remains binding upon me / us and open for acceptance by the Purchases / Employer during the validity period indicated and calculated from the closing date of the bid.

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			
WITNESS 1		WITNESS 2	



CONTRACT NO B/SM 28/27

APPOINTMENT OF A CONTRACTOR FOR CONSTRUCTION OF BASIC SERVICES AT ENKANINI INFORMAL SETTLEMENTS.

BOOK OF TENDER DRAWINGS

OCTOBER 2026

**STELLENBOSCH MUNICIPALITY
PO BOX 17
STELLENBOSCH
7599**

[illegible][illegible]

VST CONSULTING ENGINEERS			
TITLE	NAME	SIGN	DATE
DRAWN	-		- -
CHECKED	-		- -
DESIGNED	-		- -
CHECKED	-		- -
-	-		- -
-	-		- -
-	-		- -
PR. ENG. / PR. TECH. ENG			
NAME	SUGAN THAVAR		DATE
SIGNATURE			- -
REG. NUMBER	200670054		
SCALE	AS SHOWN		



Consulting Engineers (Pty) Ltd

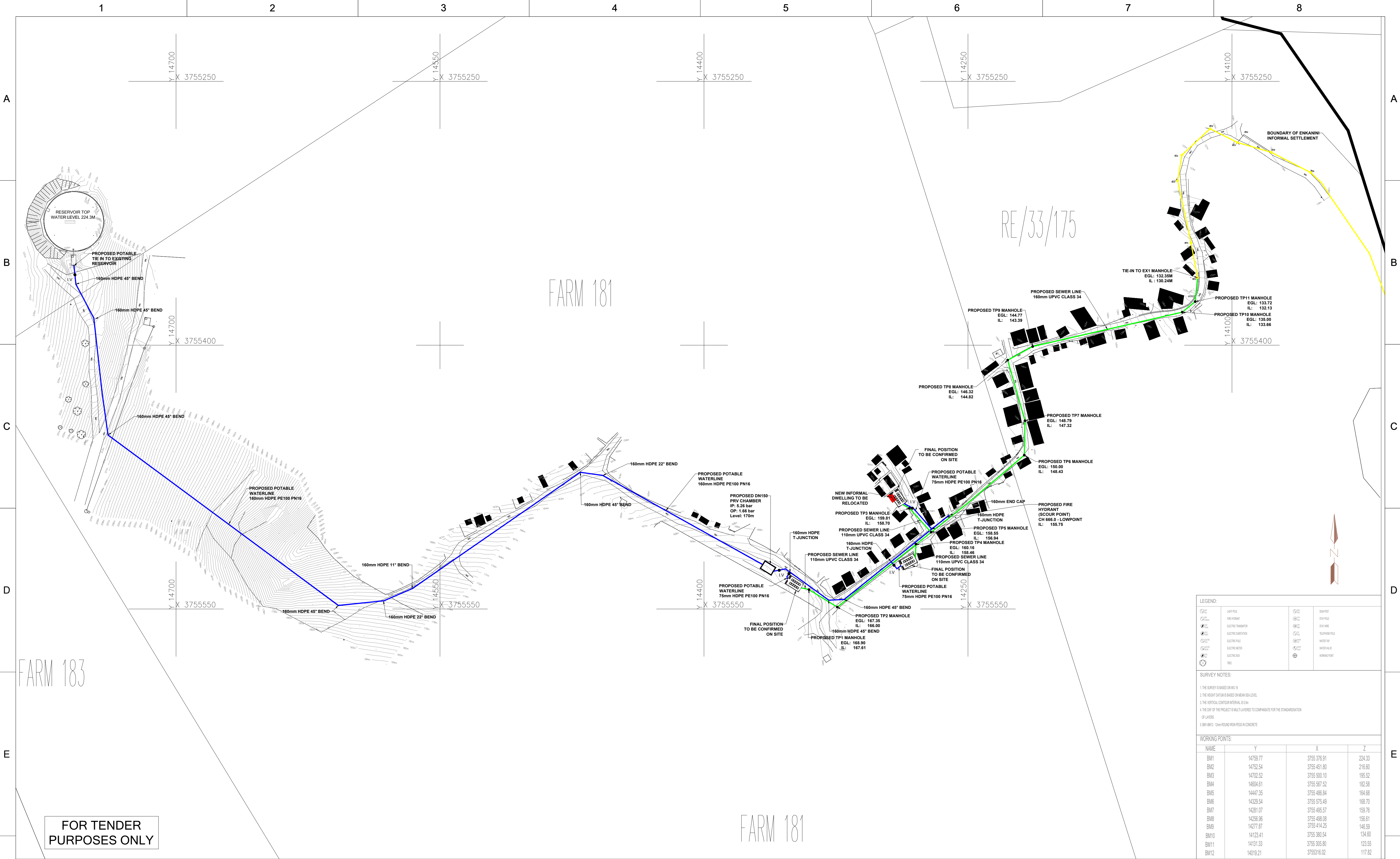
STELLENBOSCH MUNICIPALITY

Suite 12, 2nd Floor, Orion Office Park, 49
 Richefond Circle,
 Umhlanga Ridge, 4320
 Tel: 031 566 2131
 Fax: 086 516 7445
 Email: dm@vstce.co.za
 Web: www.vstce.co.za

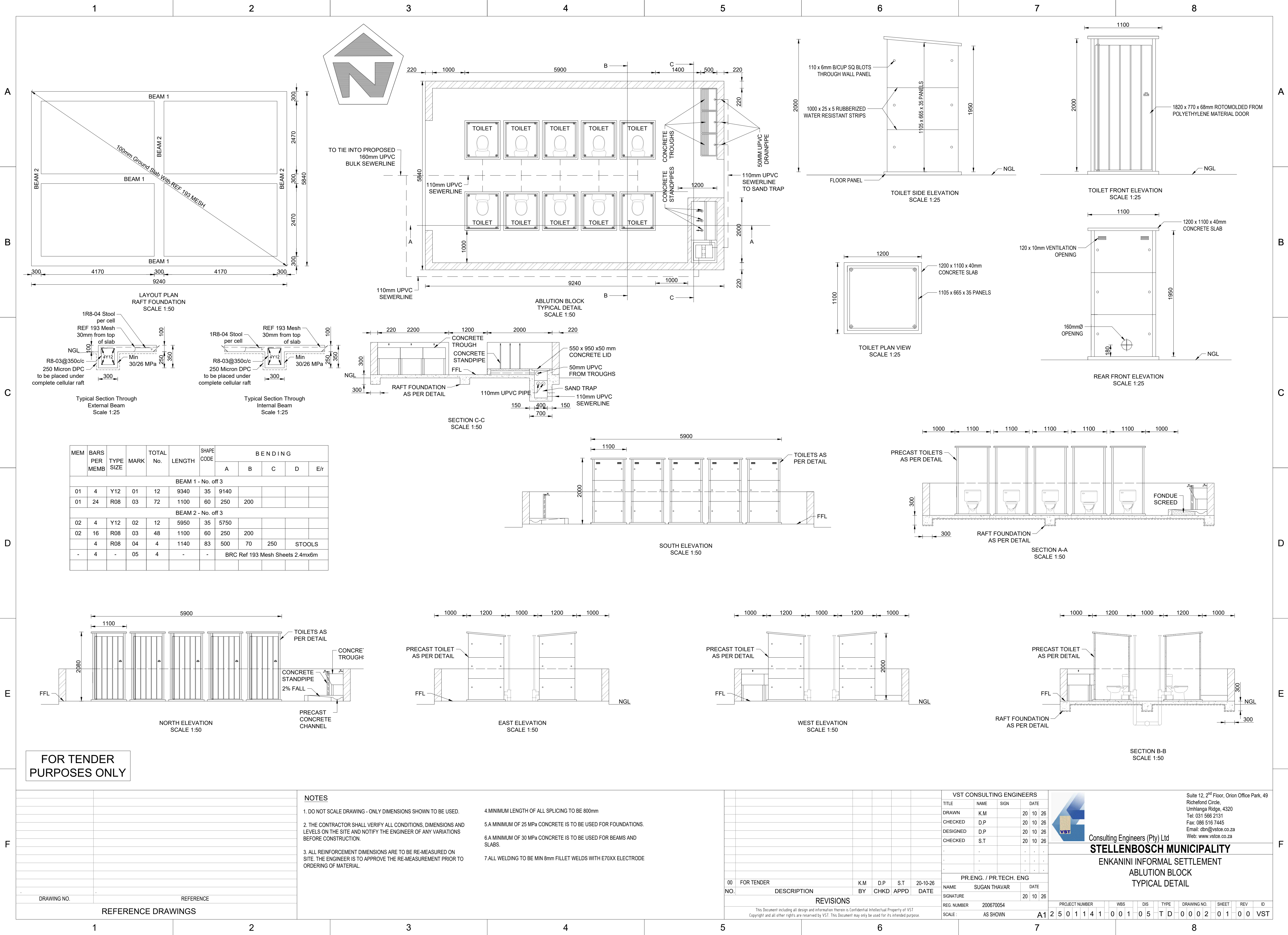
ENKANINI INFORMAL SETTLEMENT

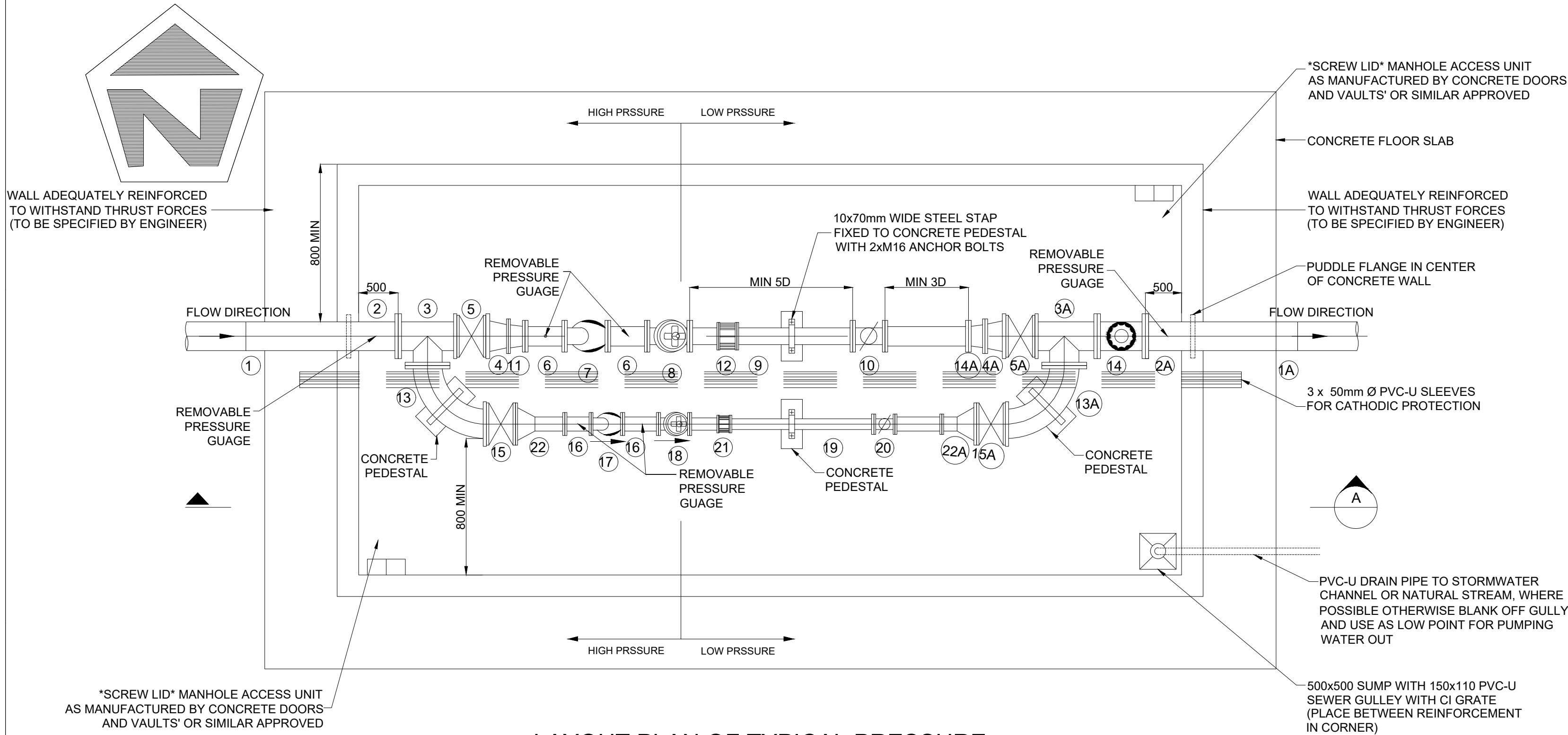
ABLUTION BLOCK

SITE PLAN



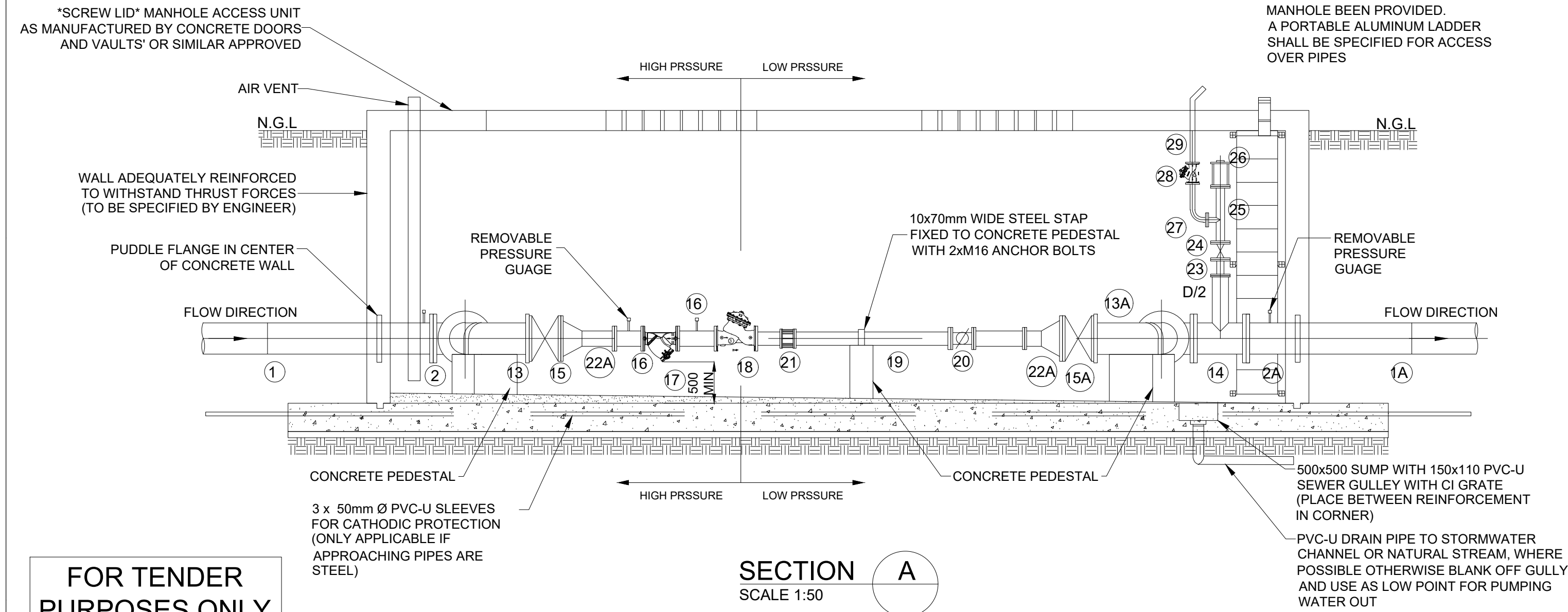
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LAYOUT PLAN OF TYPICAL PRESSURE
REDUCING VALVE CHAMBER
SCALE 1:50

- NOTE:
- FOR "SCREW LID" MANHOLE ACCESS UNIT
DETAILS SEE DRAWING NO 7515-VC223.
 - FOR STAINLESS STEEL LADDER & AIR VENT
DETAIL SEE DRAWING NO 7515-VC222

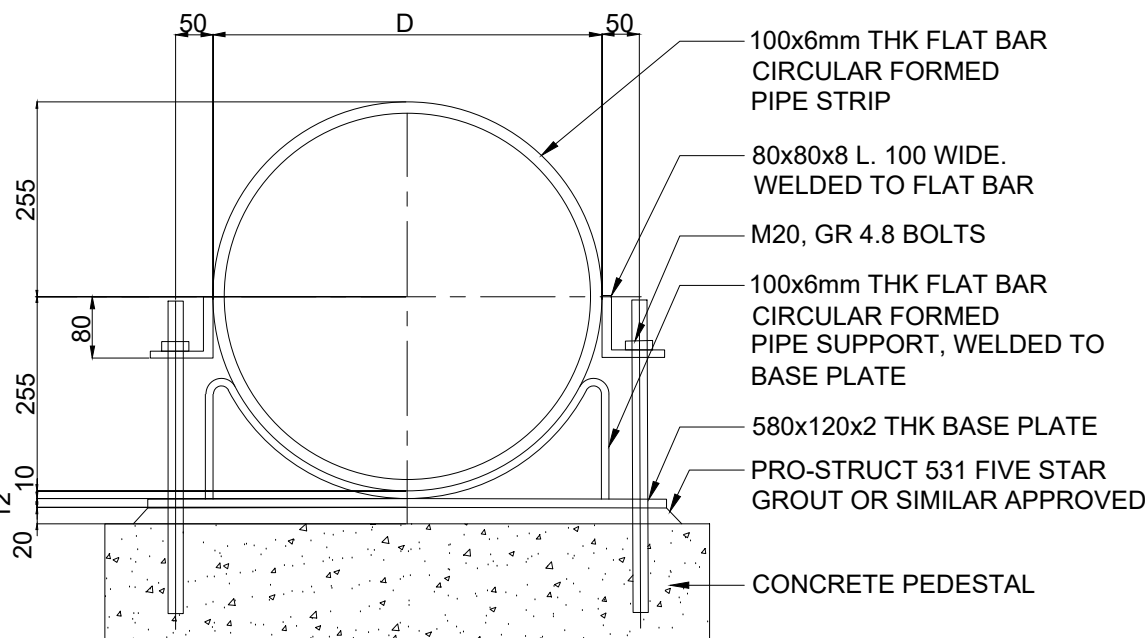


SECTION A
SCALE 1:50

NOTE:
IN THE CASE OF ONLY ONE ACCESS
MANHOLE BEEN PROVIDED.
A PORTABLE ALUMINUM LADDER
SHALL BE SPECIFIED FOR ACCESS
OVER PIPES

TYPICAL STEEL PIPE FITTINGS AND ITEMS (400NB PIPE LINE USED AS AN EXAMPLE)							
ITEM NR.	DESCRIPTION	NR. OFF	DIMENSIONS	ITEM NR.	DESCRIPTION	NR. OFF	DIMENSIONS
1	400 Ø FLANGE ADAPTOR PIPE, FITTING WELDED TO INCOMING STEEL LINE - FLANGE TO SANS 1123 - 2500/3 FOR OTHER PIPE MATERIALS	1	1750	20	250 Ø MEINECKE TURBINE COSMOS WPD WATER METER, PN16, BOTH ENDS FLANGED TO SANS 1123 - 1600/3 (OR SIMILAR APPROVED)	1	
2	400 Ø x 1750 LONG STEEL PIPE WITH PUDDLE FLANGE, UPSTREAM END FLANGE FOR STEEL BOTH ENDS FLANGE FOR OTHER MATERIALS (FLANGES TO SANS 1123 - 2500/3)	1	1125 600	21	150 Ø STEEL RESTRAINED COUPLING SUCH AS KLAMFLEX RESTRAINED FLANGE ADAPTOR, OR SIMILAR APPROVED, PN16, FLANGED TO SANS 1123 - 1600/3	1	280 400
3	400 Ø x 400 Ø STEEL TEE WITH ALL ENDS FLANGED TO SANS 1123 - 2500/3	1		22	400 Ø x 150 Ø STEEL REDUCER, BOTH ENDS FLANGED TO SANS 1123 - 2500/3	1	
4	400 Ø x 300 Ø STEEL REDUCER WITH BOTH ENDS FLANGED TO SANS 1123 - 2500/3	1		23	200 Ø x 100 Ø STEEL REDUCER, BOTH ENDS FLANGED TO SANS 1123 - 2500/3	1	
5	300 Ø GATE VALVE, PN25, WITH HAND WHEEL AND ANTI-CLOCKWISE CLOSING TO SANS 664, BOTH ENDS FLANGED TO SANS 1123 - 2500/3	1		24	100 Ø RSV GATE VALVE, PN16, WITH HAND WHEEL AND ANTI-CLOCKWISE CLOSING TO SANS 664, BOTH ENDS FLANGED TO SANS 1123 - 1600/3	1	
6	250 Ø STEEL, STRAIGHT WITH BOTH ENDS FLANGED TO SANS 1123 - 2500/3	1	300	25	100 Ø x 50 Ø STEEL REDUCING TEE WITH ALL ENDS FLANGED TO SANS 1123 - 1600/3	1	200 400
7	250 Ø BERMAD 70F STRAINER, PN25, STAINLESS STEEL SCREEN & BASKET, ENDS FLANGED TO SANS 1123 - 2500/3 (OR SIMILAR APPROVED)	1		26	100 Ø VAG DUOJET AIR RELEASE & VACUUM BREAK VALVE PN16, FLANGED TO SANS 1123 - 1600/3, (OR SIMILAR APPROVED)	1	
8	250 Ø CLAYTON PRESSURE REDUCING VALVE COMPLETE WITH LOW FLOW ADAPTOR, OR SIMILAR APPROVED, PN25, ENDS FLANGED TO SANS 1123 - 2500/3	1		27	50 Ø x 90° STEEL BEND WITH BOTH ENDS FLANGED TO SANS 1123 - 1600/3	1	175 400
9	250 Ø STEEL, STRAIGHT ONE END FLANGED TO SANS 1123 - 2500/3	1	MIN 50 x 2000	28	50 Ø BERMAD 730 QUICK PRESSURE RELIEF VALVE COMPLETE, PN16, ENDS FLANGED TO SANS 1123 - 1600/3 (OR SIMILAR APPROVED)	1	
10	250 Ø MEINECKE TURBINE COSMOS WPD WATER METER, PN16, BOTH ENDS FLANGED TO SANS 1123 - 2500/3 (OR SIMILAR APPROVED)	1		29	50 Ø STEEL PIPEWORK COMPLETE TO OUTSIDE OF CHAMBER THROUGH 80 Ø DUCK IN CONCRETE, CONN. TO QUICK PRESSURE RELIEF VALVE'S DISCHARGE END, ONE END FLANGED TO SANS 1123 - 1600/3	1	1 x (ALL FITTINGS)
11	300 Ø x 250 Ø STEEL REDUCER, BOTH ENDS FLANGED TO SANS 1123 - 2500/3	1		1A	400 Ø FLANGE ADAPTOR PIPE, FITTING WELDED TO INCOMING STEEL LINE - FLANGED TO SANS 1123 - 2500/3 FOR OTHER PIPE MATERIALS	1	
12	250 Ø STEEL, RESTRAINED COUPLING SUCH AS KLAMFLEX RESTRAINED FLANGE ADAPTOR, OR SIMILAR APPROVED, PN16, FLANGED TO SANS 1123 - 1600/3	1		2A	400 Ø x 1314 LONG STEEL PIPE WITH PUDDLE FLANGE, UPSTREAM END FLANGE FOR STEEL BOTH ENDS FLANGE FOR OTHER MATERIALS (FLANGES TO SANS 1123 - 1600/3)	1	1125 600
13	400 Ø x 90° LONG RADIUS STEEL BEND WITH BOTH ENDS FLANGED TO SANS 1123 - 2500/3	1	400 815	3A	400 Ø x 400 Ø STEEL TEE WITH ALL ENDS FLANGED TO SANS 1123 - 1600/3	1	400 400
14	400 Ø x 200 Ø STEEL TEE WITH ALL ENDS FLANGED TO SANS 1123 - 1600/3	1		4A	400 Ø x 300 Ø STEEL REDUCER WITH BOTH ENDS FLANGED TO SANS 1123 - 1600/3	1	
15	150 Ø RSV GATE VALVE, PN25, WITH HAND WHEEL AND ANTI-CLOCKWISE CLOSING TO SANS 664, BOTH ENDS FLANGED TO SANS 1123 - 2500/3	1		5A	300 Ø GATE VALVE, PN16, WITH HAND WHEEL AND ANTI-CLOCKWISE CLOSING TO SANS 664, BOTH ENDS FLANGED TO SANS 1123 - 1600/3	1	
16	150 Ø STEEL, STRAIGHT WITH BOTH ENDS FLANGED TO SANS 1123 - 1600/3	1	280	11A	300 Ø x 250 Ø STEEL REDUCER, BOTH ENDS FLANGED TO SANS 1123 - 1600/3	1	
17	250 Ø BERMAD 70F STRAINER, PN25, STAINLESS STEEL SCREEN & BASKET, ENDS FLANGED TO SANS 1123 - 2500/3 (OR SIMILAR APPROVED)	1		13A	400 Ø x 90° LONG RADIUS STEEL BEND WITH BOTH ENDS FLANGED TO SANS 1123 - 1600/3	1	400 815
18	250 Ø BERMAD FLAT DISK PRESSURE REDUCING VALVE PN25, ENDS FLANGED TO SANS 1123 - 2500/3 (OR SIMILAR APPROVED)	1		15A	150 Ø RSV GATE VALVE, PN25, WITH HAND WHEEL AND ANTI-CLOCKWISE CLOSING TO SANS 664, BOTH ENDS FLANGED TO SANS 1123 - 2500/3	1	
19	150 Ø STEEL, STRAIGHT ONE END FLANGED TO SANS 1123 - 2500/3	1	MIN 50 x 1000	22A	400 Ø x 150 Ø STEEL REDUCER, BOTH ENDS FLANGED TO SANS 1123 - 1600/3	1	280 400

- NOTES AND SPECIFICATIONS
- GENERAL
- ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SANS STANDARD
 - ALL DIMENSIONS ARE IN mm (UNLESS OTHERWISE SPECIFIED)
 - DO NOT SCALE FROM THESE DRAWINGS
 - ALL DIMENSIONS TO BE CHECKED AND APPROVED ON SITE
 - ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, THIRD EDITION 2005 AND THE STANDARD COT DETAIL DRAWINGS
 - THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE STANDARD DRAWINGS (IF APPLICABLE)
 - THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, SERIES 4
 - THE SIGNATURE OR INITIALS ON THIS DRAWING OF ANY DIRECTOR OF THE WATER AND SANITATION DEPARTMENT, IN NO WAY, REMOVES ANY RESPONSIBILITY WHATSOEVER FROM THE CONSULTANT
 - THE CONSULTANT REMAINS RESPONSIBLE TO ENSURE THAT ALL THE GUIDELINES, STANDARD DRAWINGS, STANDARDS AND SPECIFICATIONS OF THE WATER AND SANITATION DEPARTMENT HAVE BEEN MET AND ARE COMPLIED WITH
 - FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE
- PARTICULAR
- THIS DRAWING SHOWS THE TYPICAL LAYOUT OF THE PIPING AND FITTINGS REQUIRED FOR A PRV CHAMBER.
 - EACH INDIVIDUAL CHAMBER SHALL BE PROPERLY DESIGNED BY A COMPETENT PERSON
 - PRV CHAMBERS SHALL BE APPROVED BY THE EXECUTIVE DIRECTOR - WATER AND SANITATION BEFORE CONSTRUCTION
 - ALL VALVE TYPES AND FITTINGS MUST BE APPROVED BY THE ENGINEER
 - T-PIECES MAY REQUIRE REINFORCEMENT USING WRAPPER PLATES TO INCREASE WALL THICKNESS OR GROUT PLATES TO COMPENSATE FOR RIGIDITY LOST DURING MANUFACTURE. THE DESIGN OF THE FITTING SHALL BE DONE IN ACCORDANCE WITH AWWA M11



TYPICAL PIPE SUPPORT DETAIL
SCALE 1:10

PRV DESIGN PROPOSED SETTING (WITH CLAYTON PRV)			
MAIN LEG			
DESCRIPTION	VALUE	UNIT	REMARKS
MINIMUM LOW (Q MIN.)		l/s	
MINIMUM LOW (Q MIN. 'PEAK DEMAND FLOW')		l/s	PEAK DEMAND FLOW
MINIMUM INLET PRESSURE 'DYNAMIC PRESSURE' (AT MAX FLOW)		m	FROM WADISO PROGRAM
MINIMUM INLET PRESSURE 'DYNAMIC PRESSURE' (AT MIN. FLOW)		m	FWL - PRV GROUND ELEVATION
DOWNSTREAM PRESSURE (PROPOSED PRV SETTINGS)		m	
PRV SIZE : CALCULATED FROM CLAYTON PROGRAM		mm	FROM CLAYTON PROGRAM
BYPASS			
DESCRIPTION	VALUE	UNIT	REMARKS
MINIMUM LOW (Q MIN.)		l/s	
MINIMUM LOW (Q MIN. 'AAD0')		l/s	AADO
MINIMUM INLET PRESSURE 'DYNAMIC PRESSURE' (AT MAX FLOW)		m	FROM WADISO PROGRAM
MINIMUM INLET PRESSURE 'DYNAMIC PRESSURE' (AT MIN. FLOW)		m	FWL - PRV GROUND ELEVATION
DOWNSTREAM PRESSURE (PROPOSED PRV SETTINGS)		m	
PRV SIZE : CALCULATED FROM CLAYTON PROGRAM		mm	FROM CLAYTON PROGRAM

FOR TENDER
PURPOSES ONLY

NOTES

- DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE ENGINEER OF ANY VARIATIONS BEFORE CONSTRUCTION.
- ALL REINFORCEMENT DIMENSIONS ARE TO BE RE-MEASURED ON SITE. THE ENGINEER IS TO APPROVE THE RE-MEASUREMENT PRIOR TO ORDERING OF MATERIAL.

DRAWING NO. REFERENCE
REFERENCE DRAWINGS

VST CONSULTING ENGINEERS

TITLE	NAME	SIGN	DATE
DRAWN	K.M		20 10 26
CHECKED	D.P		20 10 26
DESIGNED	D.P		20 10 26
CHECKED	S.T		20 10 26
.	.	.	.
.	.	.	.
.	.	.	.

PR.ENG. / PR.TECH. ENG

NAME	SUGAN THAVAR	DATE
SIGNATURE		20 10 26

REG. NUMBER 200670054

SCALE: AS SHOWN

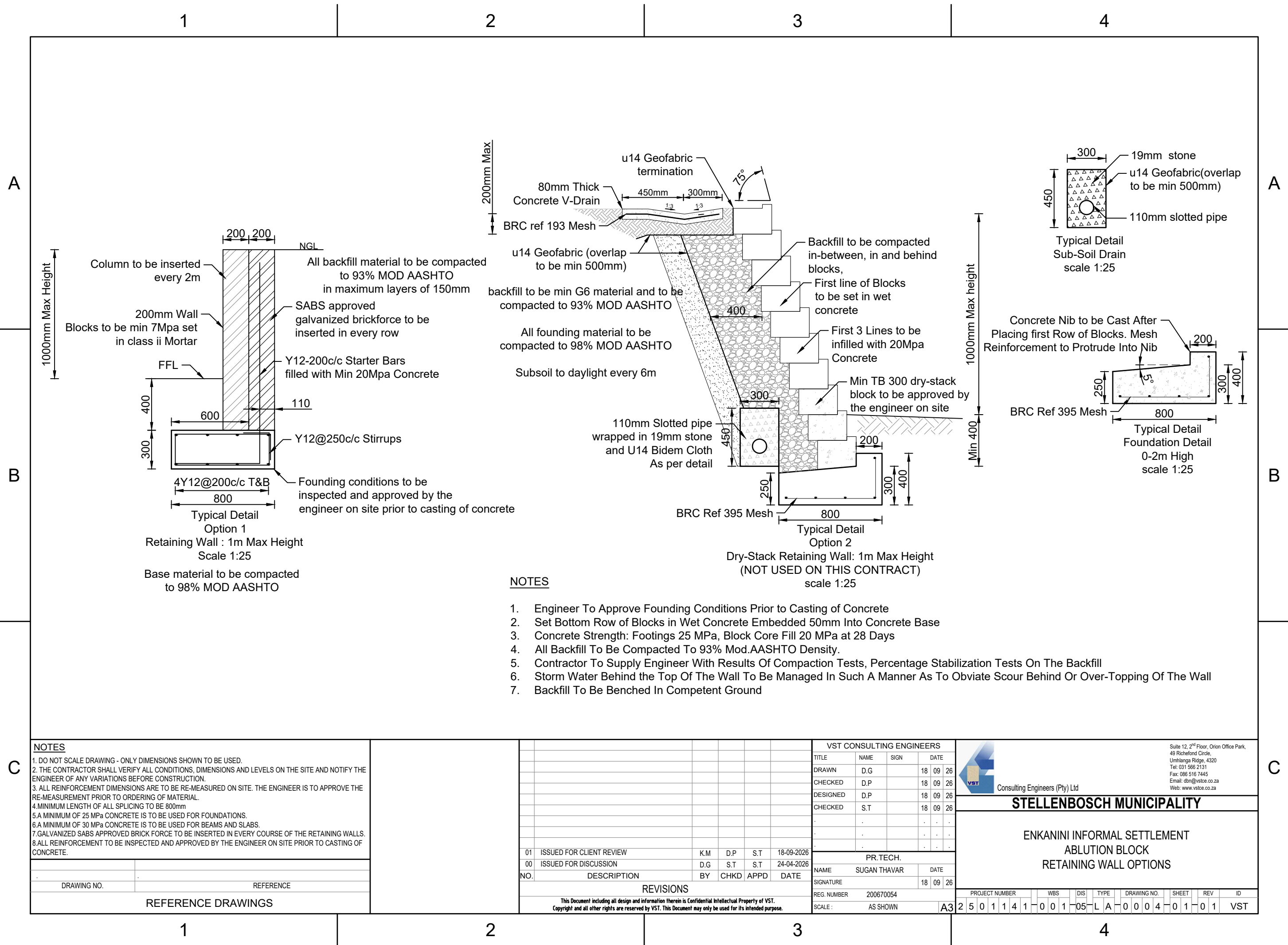


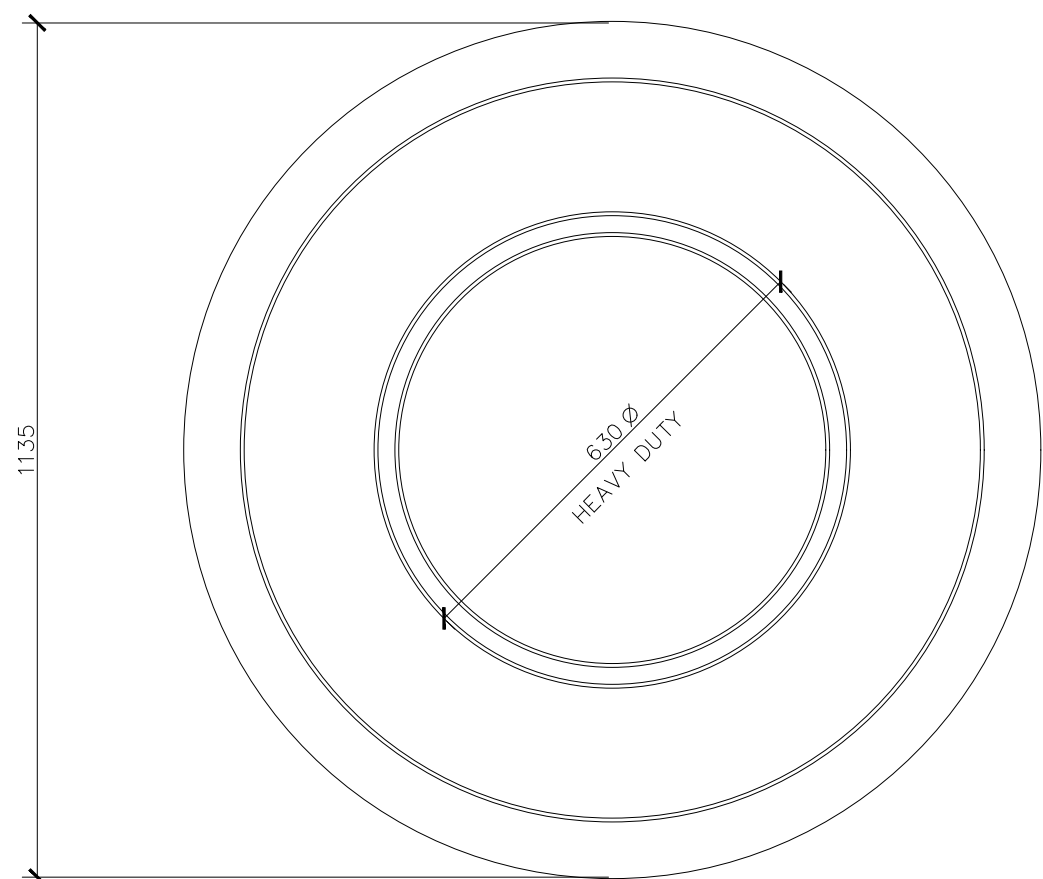
Consulting Engineers (Pty) Ltd
STELLENBOSCH MUNICIPALITY

STELLENBOSCH MUNICIPALITY
PRV CHAMBER AND INSTALLATION
TYPICAL DETAIL

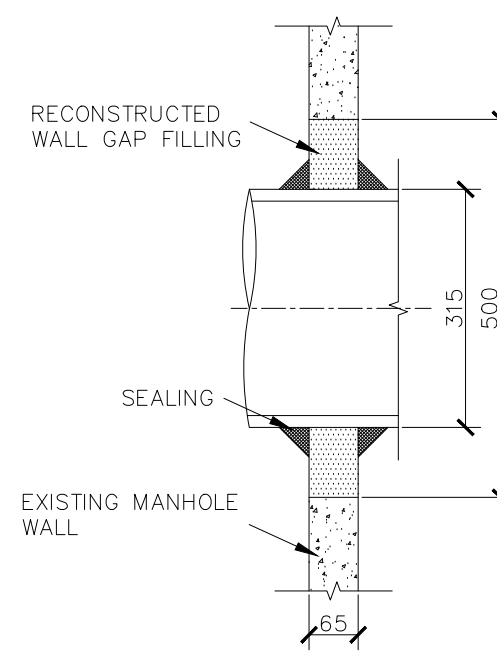
Suite 12, 2nd Floor, Orion Office Park, 49
Richards Circle,
Umhlanga Ridge, 4320
Tel: 031 566 2131
Fax: 086 516 7445
Email: dbn@vstce.co.za
Web: www.vstce.co.za

PROJECT NUMBER	WBS	DIS	TYPE	DRAWING NO.	SHEET	REV	ID
2 5 0 1 1 4 1	0 0 1	0 5	T D	0 0 0 3	0 1	0 0	VST



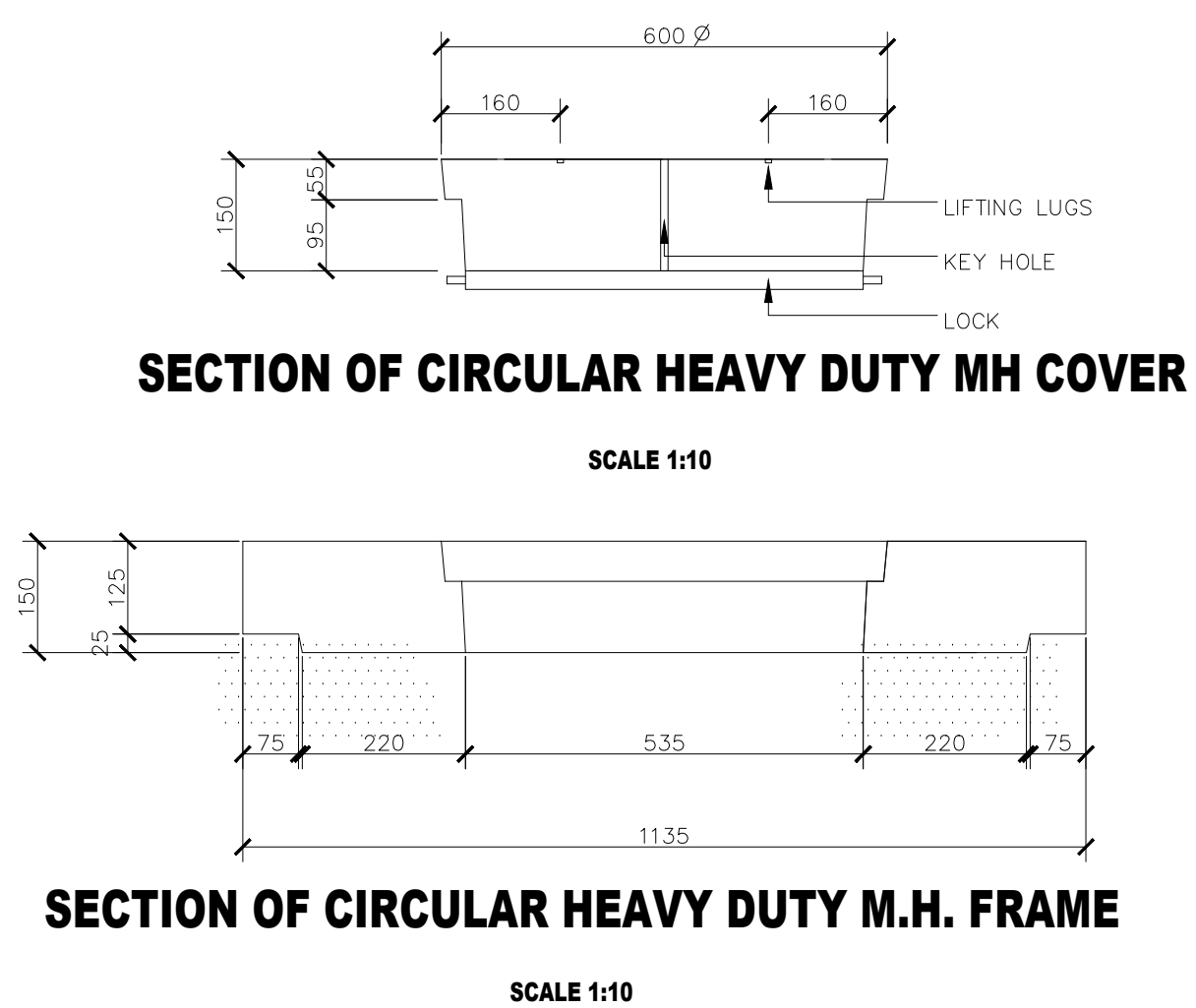


**PLAN OF CIRCULAR HEAVY DUTY
FRAME FOR 1000 NOM. DIA. SMART MANHOLE**

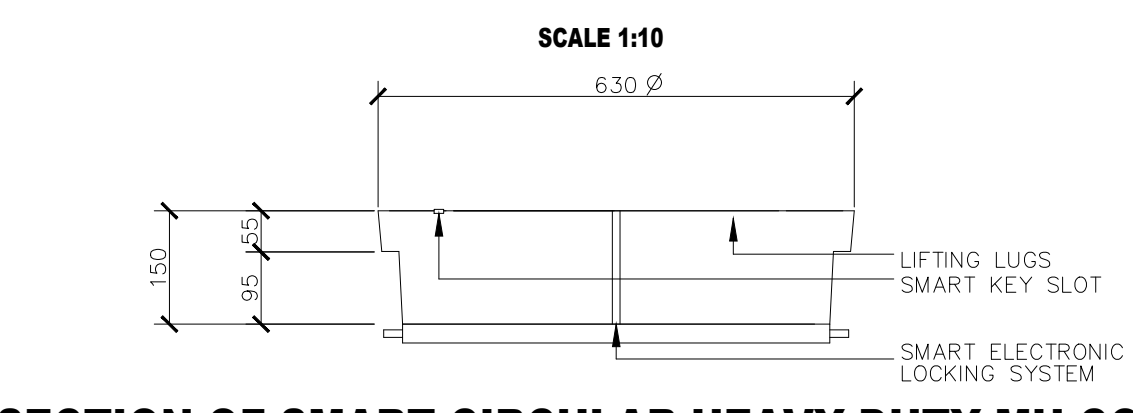


TIE IN DETAIL

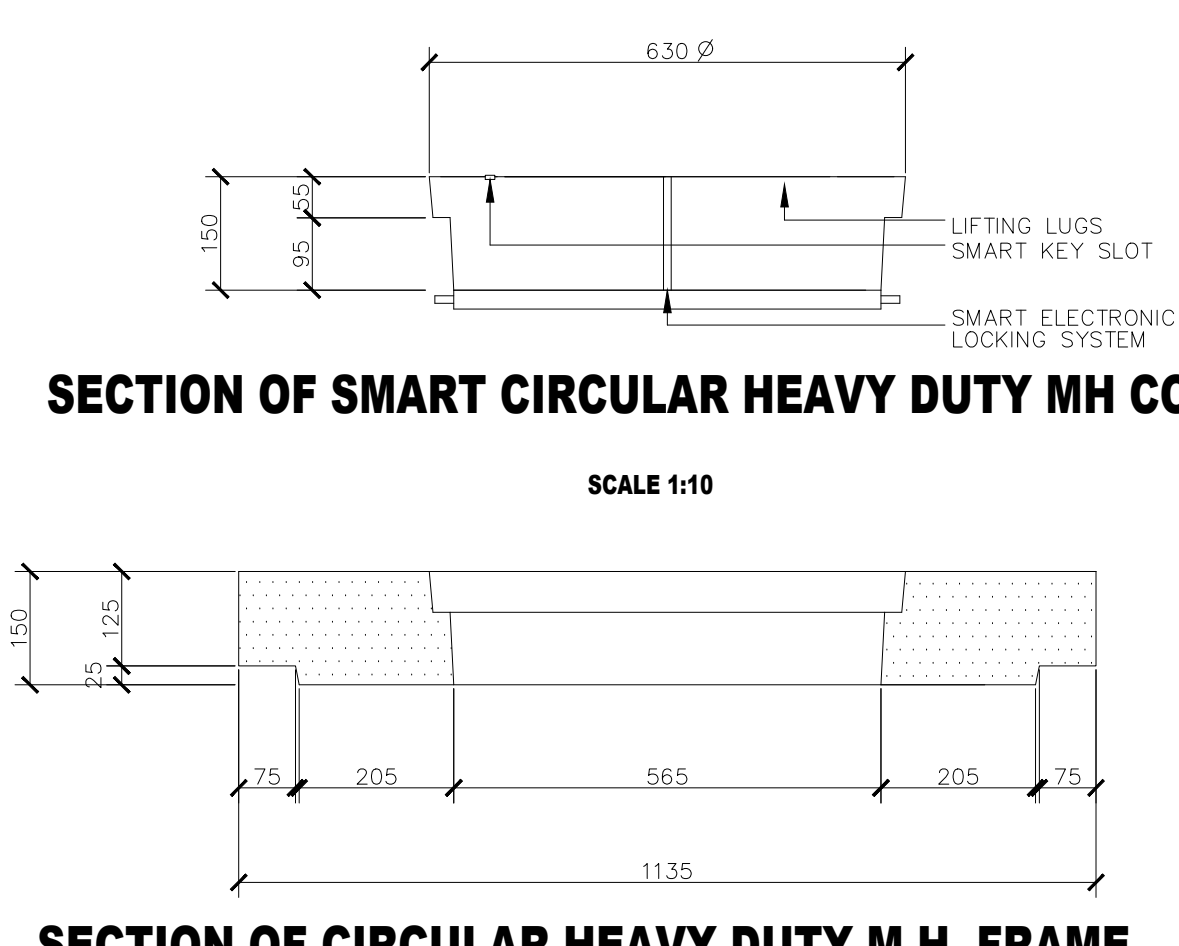
SCALE 1:10



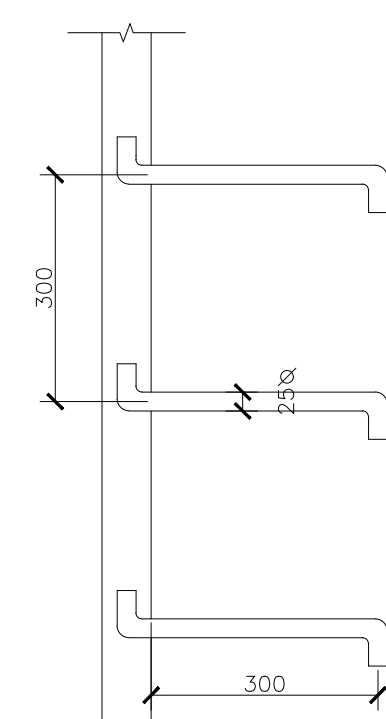
SECTION OF CIRCULAR HEAVY DUTY M.H. FRAME



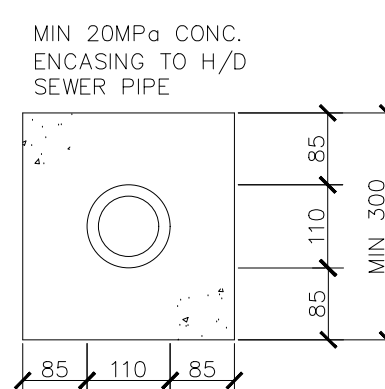
SECTION OF CIRCULAR HEAVY DUTY M.H. FRAME



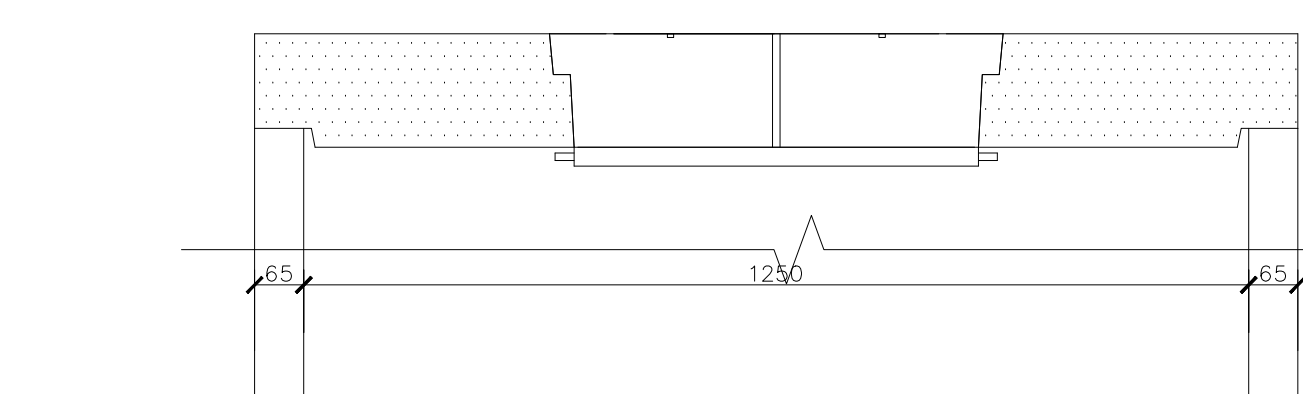
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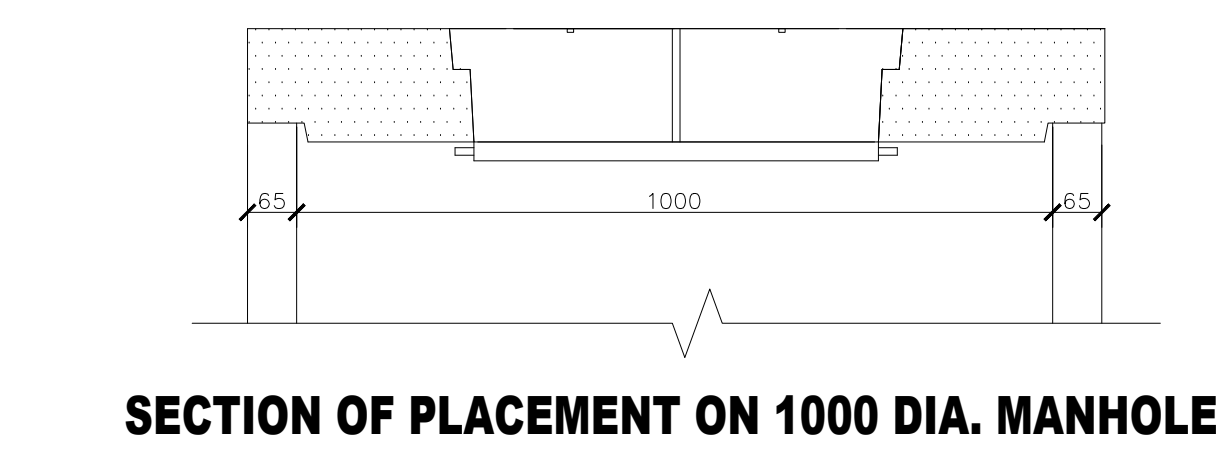
DETAIL OF STEP IRON
SCALE 1:10



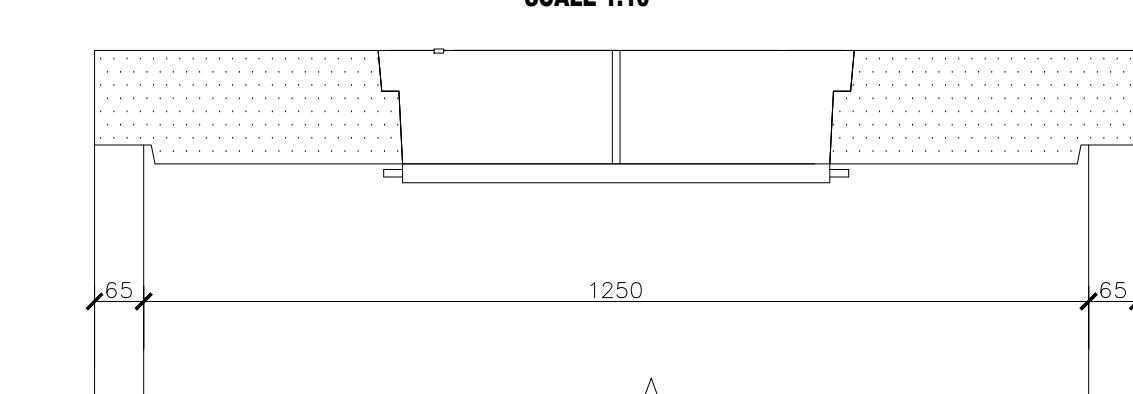
**TYPICAL PIPE ENCASEMENT
(IF REQUIRED)**
SCALE 1:100



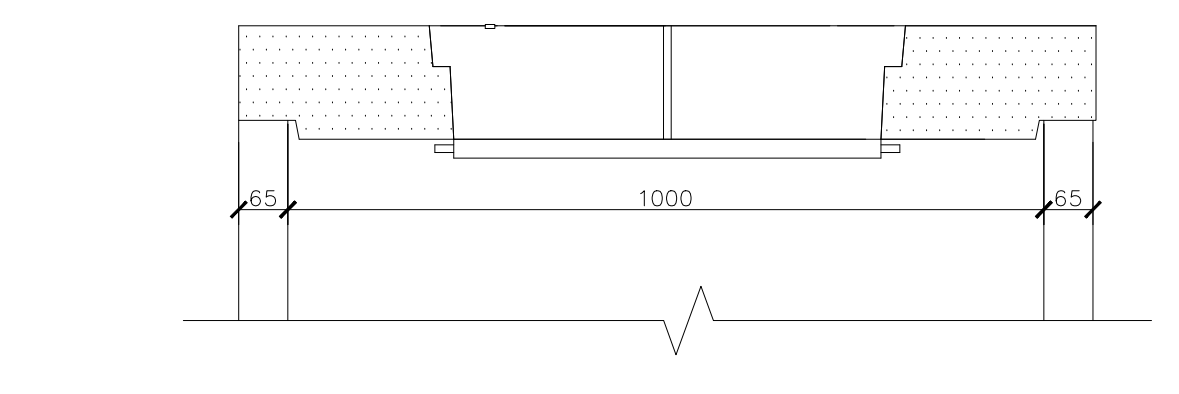
SECTION OF PLACEMENT ON 1250 DIA. MANHOLE



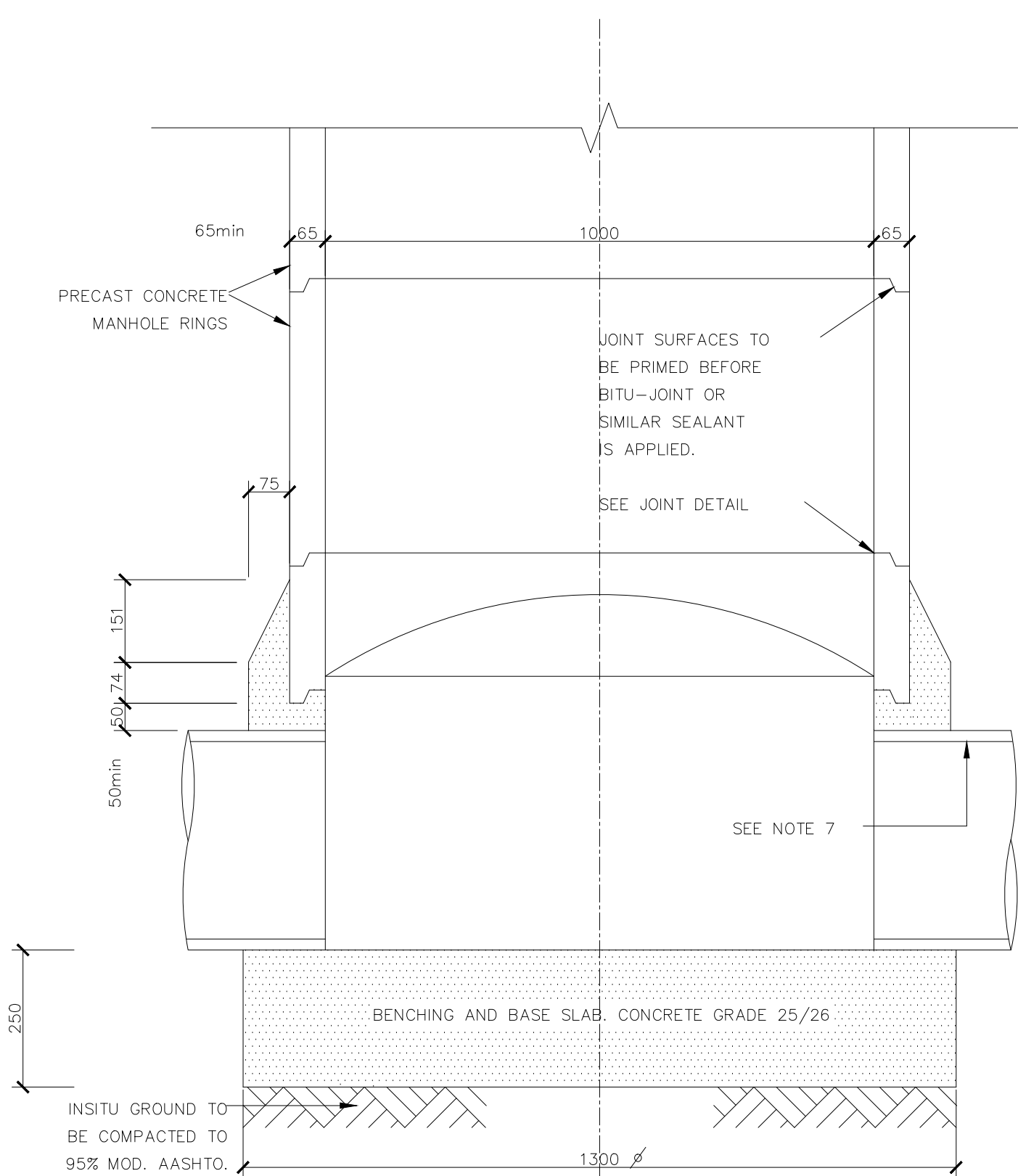
SECTION OF PLACEMENT ON 1000 DIA. MANHOLE



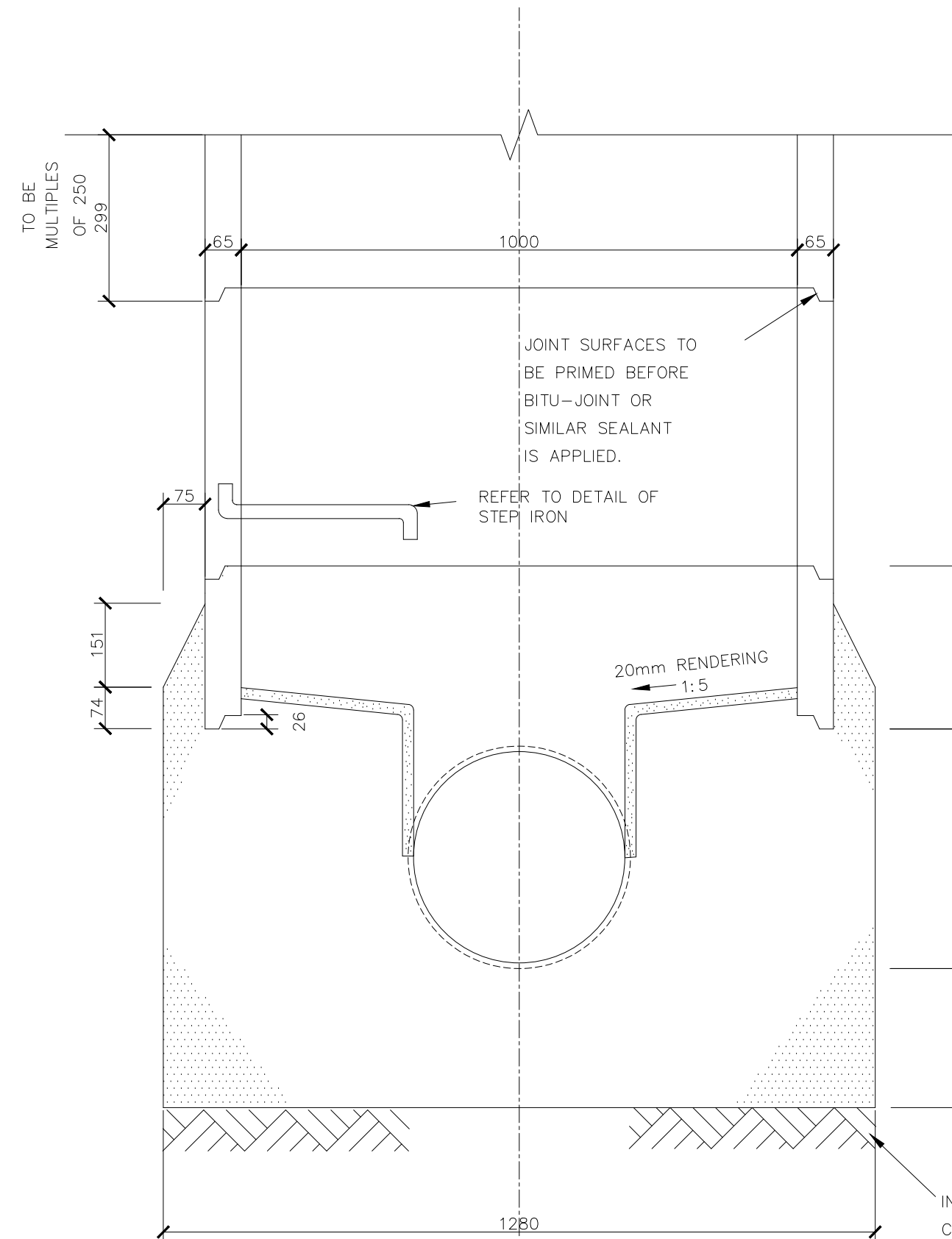
SECTION OF PLACEMENT ON 1250 DIA. MANHOLE



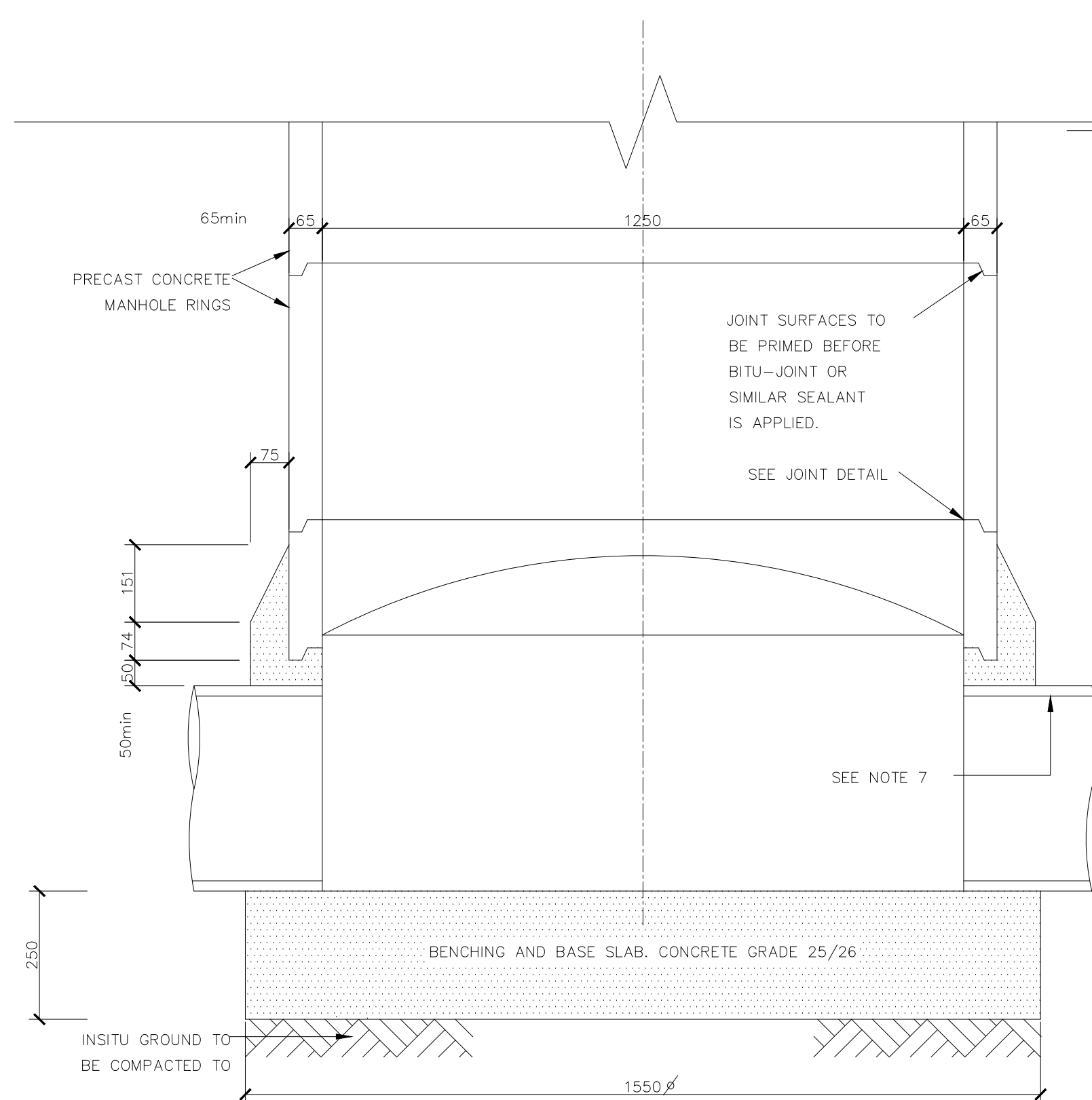
SECTION OF PLACEMENT ON 1000 DIA. MANHOLE



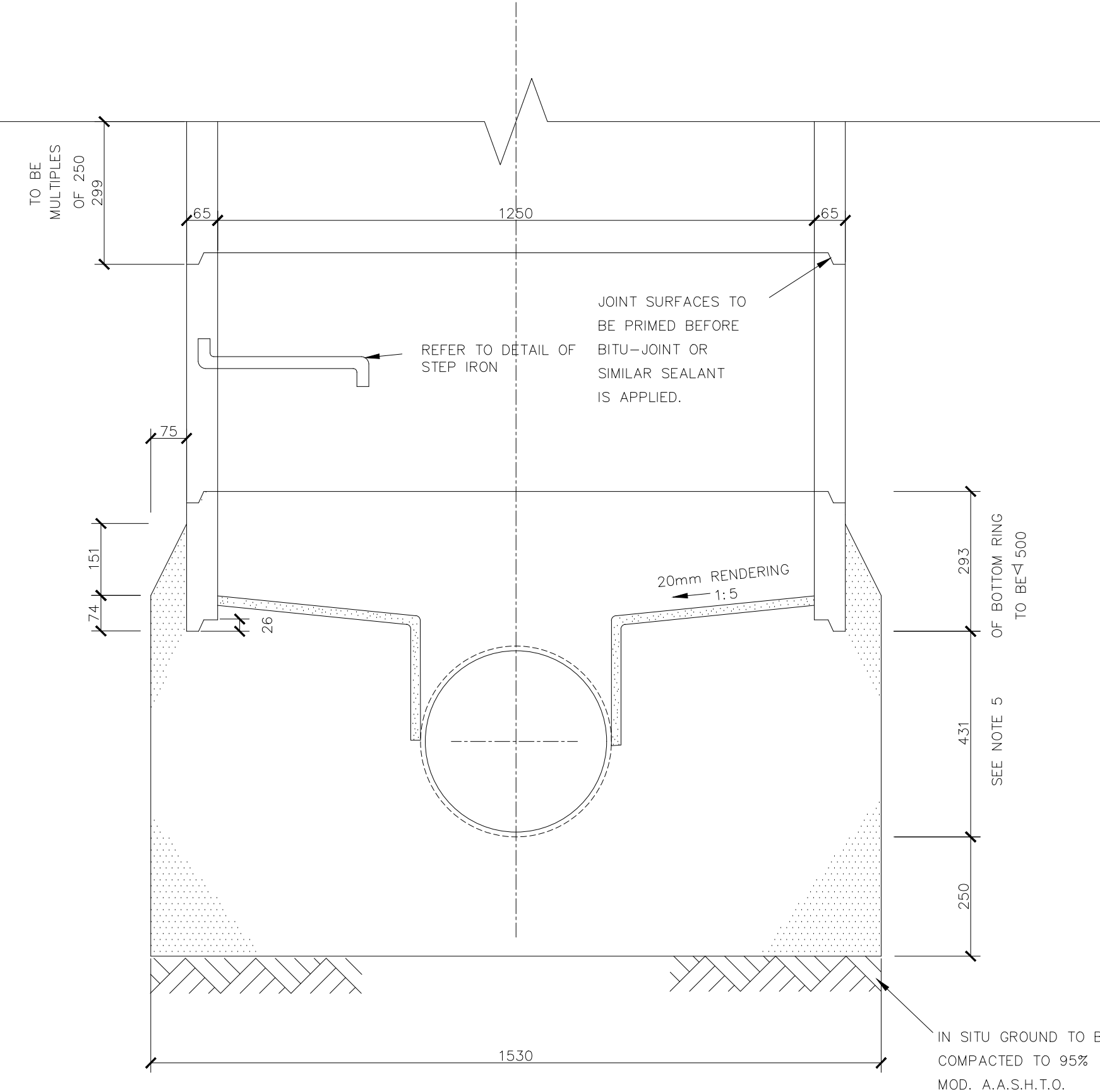
SECTION OF 1000 DIA. MANHOLE



SECTION OF 1000 DIA. MANHOLE



SECTION OF 1250 DIA. MANHOLE



SECTION OF 1250 DIA. MANHOLE

F

NOTES
1. DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE ENGINEER OF ANY VARIATIONS BEFORE CONSTRUCTION.

F

A

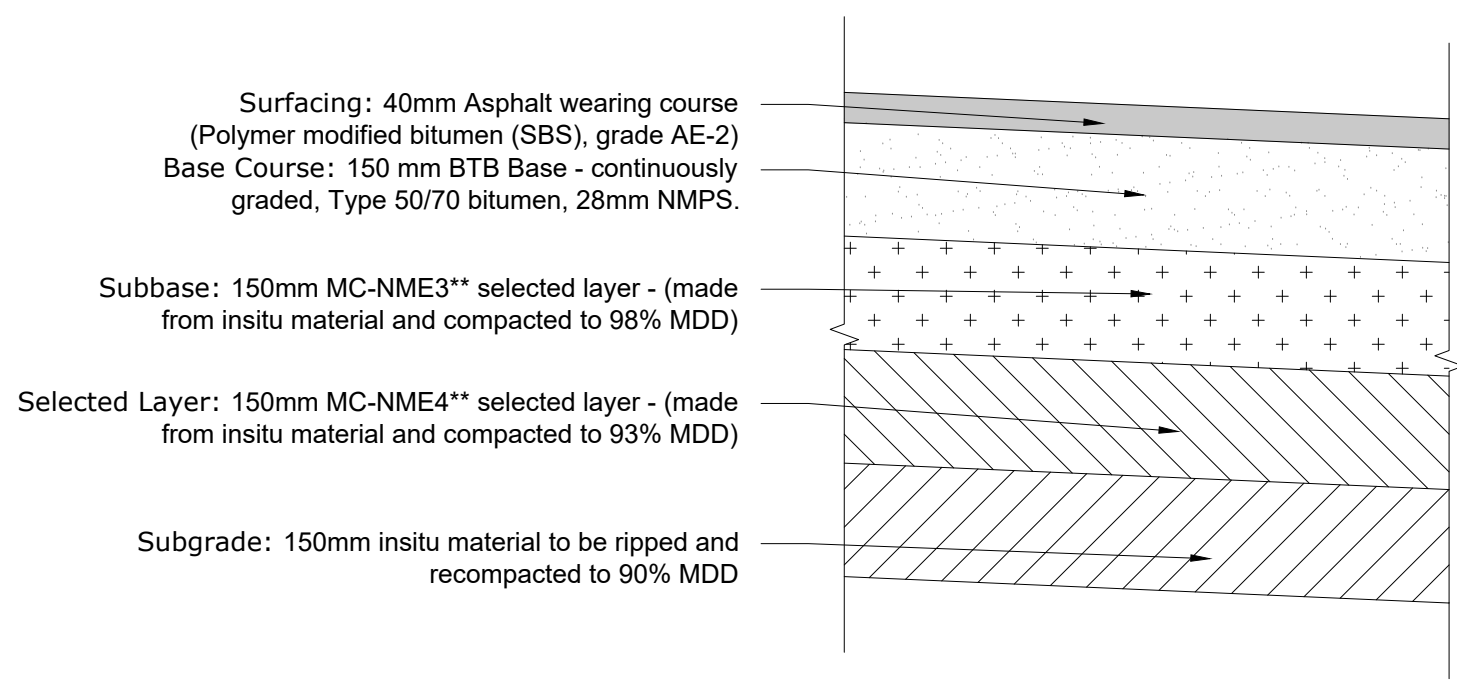
B

C

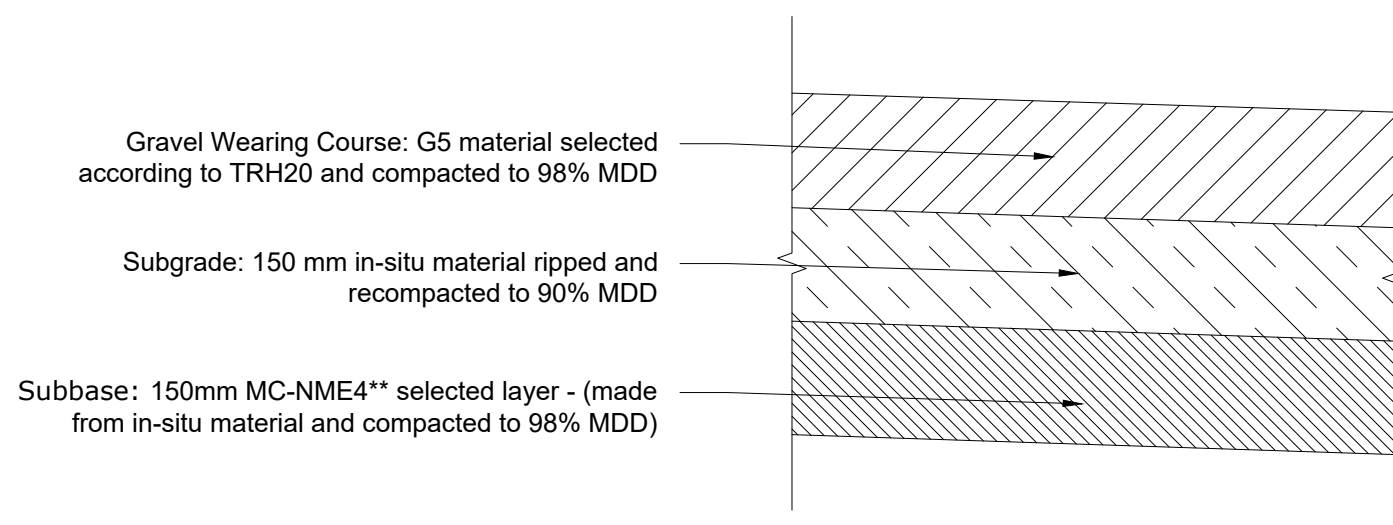
D

E

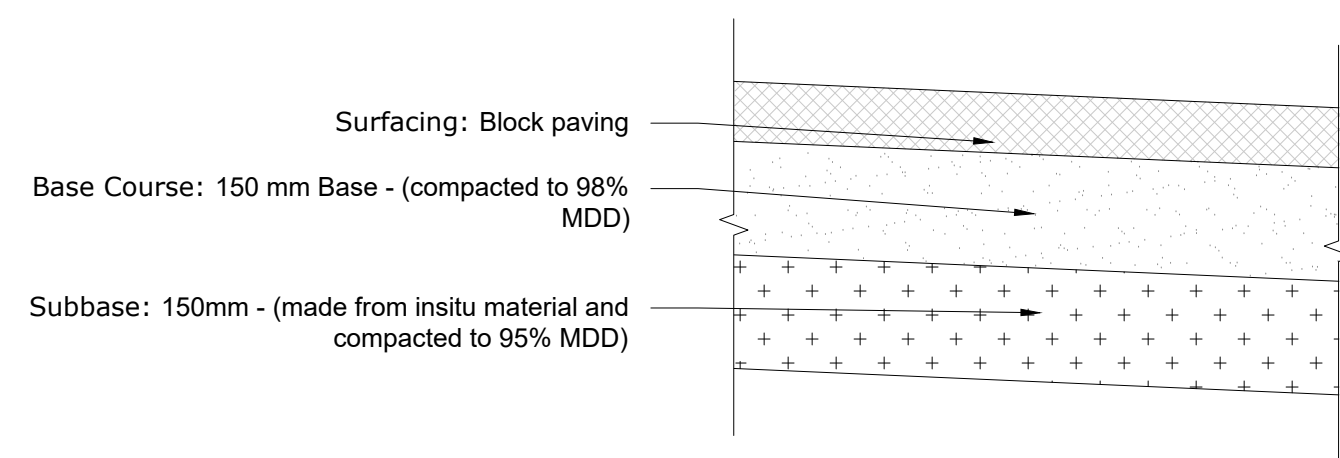
F



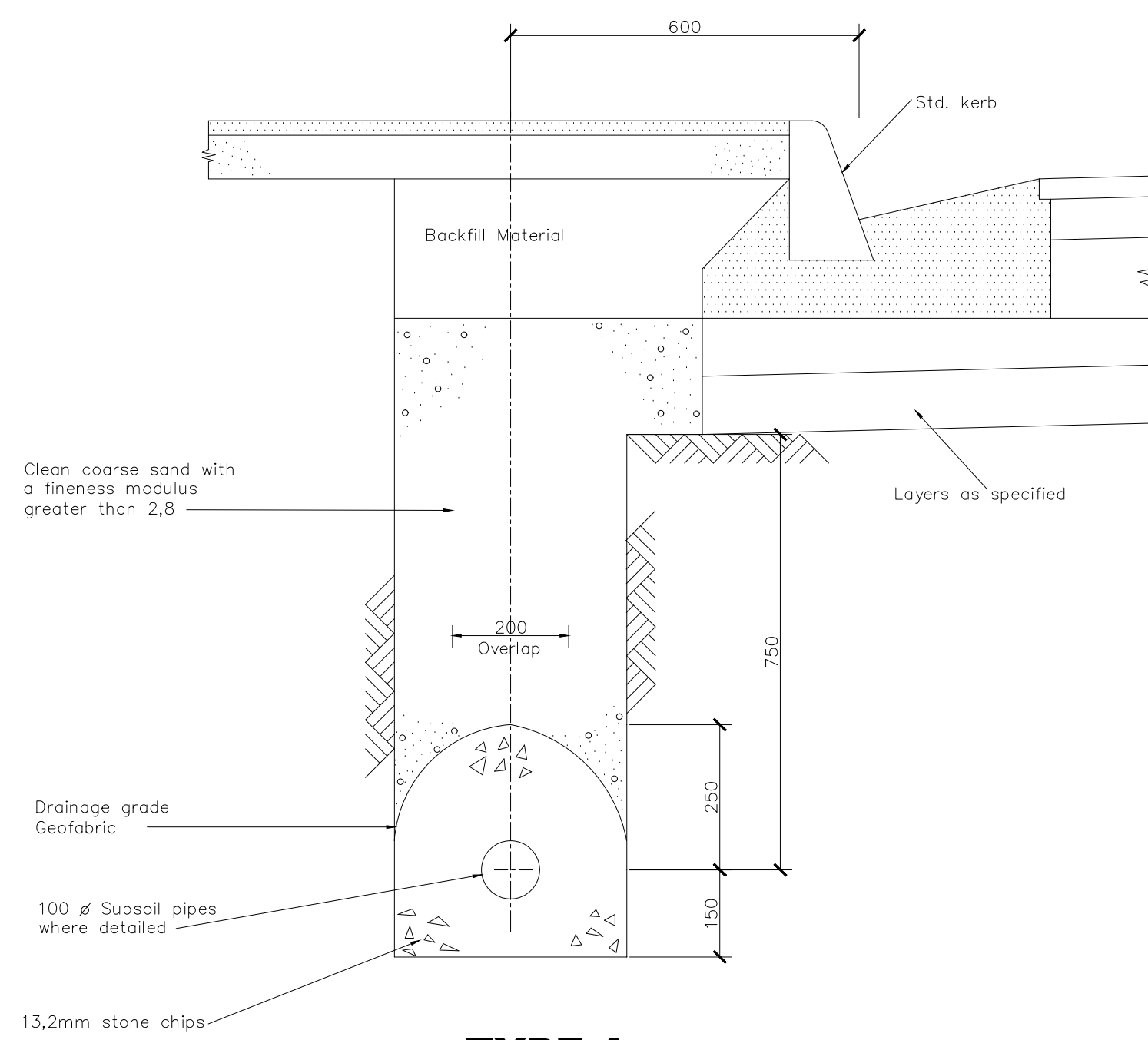
ASPHALT LAYERWORK DETAIL
NTS



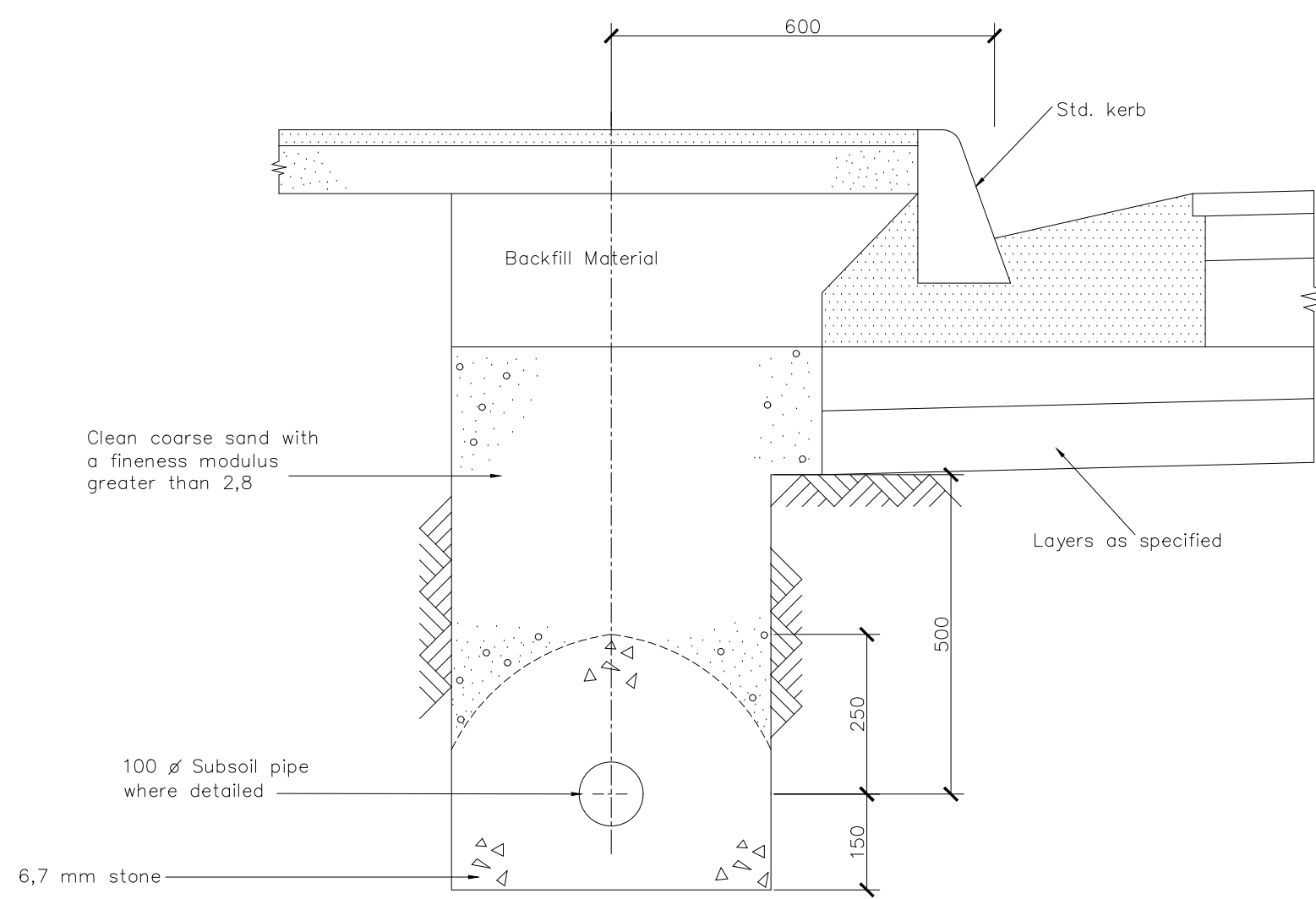
GRAVEL LAYERWORK DETAIL
NTS



BLOCK PAVING LAYERWORK DETAIL
NTS



TYPE A

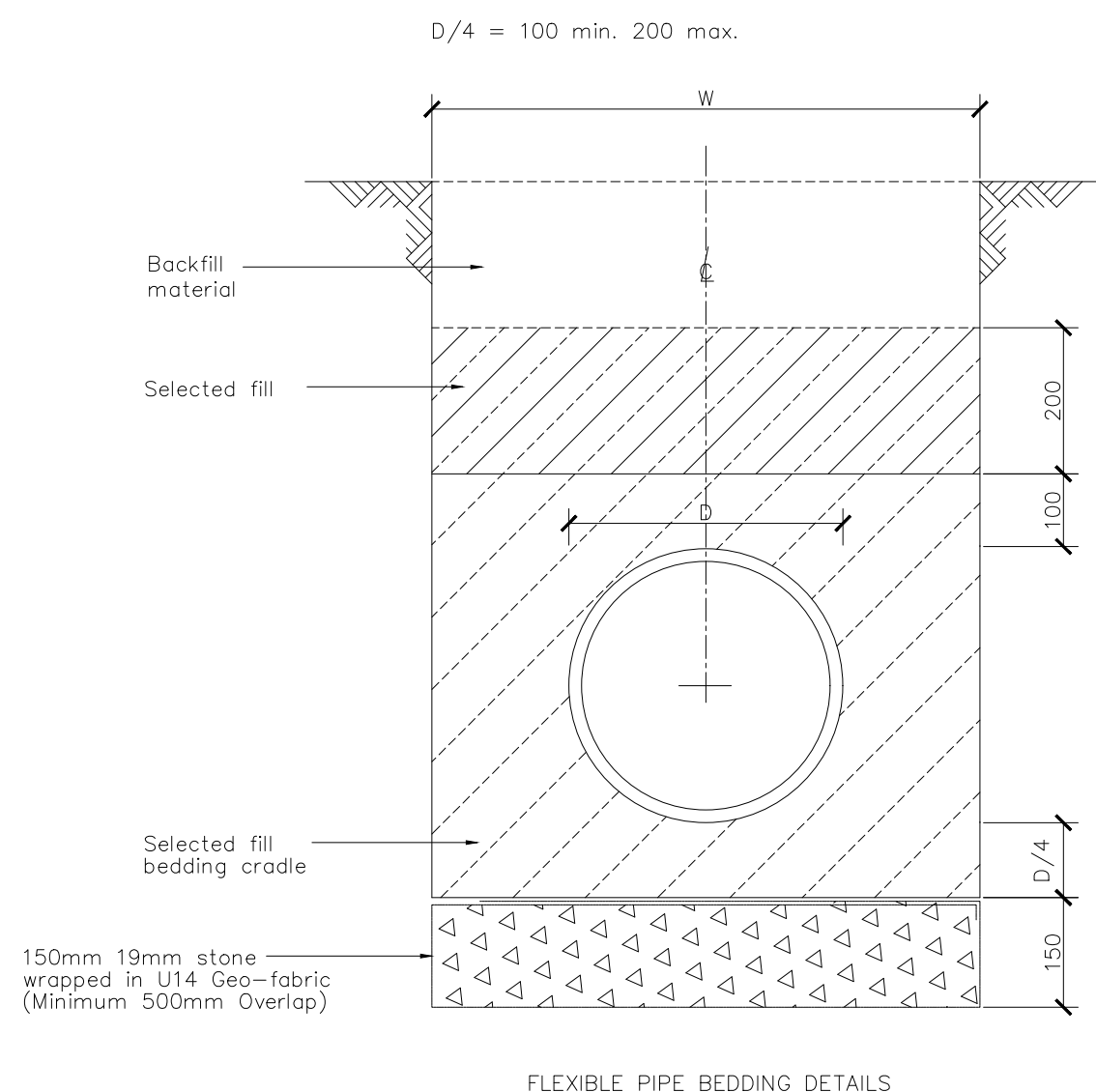


TYPE B
GRADED FILTER

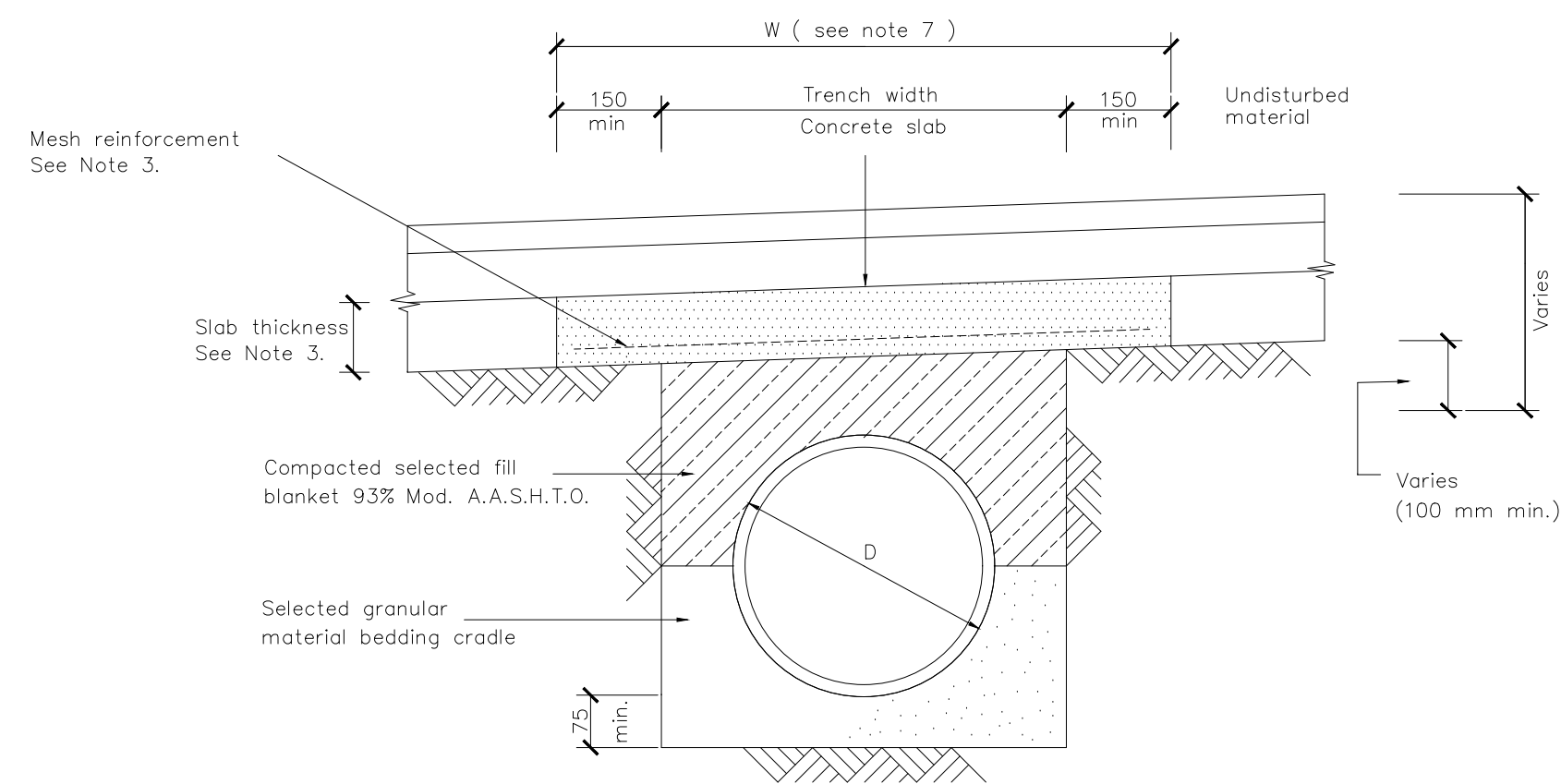
- NOTE:
1. Sand, stone, geofabric and pipe required for the sub-soil drains are to comply with the requirements of Clause P.6.3 of the specification
 2. Unless otherwise specified the sub-soil drains are to be laid at the min. depths indicated. Min grade of the drain is to be 1%.
 3. W = Pay width
D = O.D. of pipe
 4. Where detailed by Engineer clean coarse sand layer shall be extended to the edge of the road and / or raised to the level indicated for types A and B.

SUB-SOIL DRAIN DETAILS
SCALE: 1:100

- NOTE
1. This detail applies where cover is less than 300mm in servitudes and less than 600mm in road reserves.
 2. Class "B" Bedding is shown.
 3. Slab thickness and reinforcing details will be confirmed by the engineer.
 4. Slab is to consist of grade 20/26 concrete.
 5. Cover to reinforcement is to be 35mm.
 6. Construction joints are to be formed in the slab at intervals not exceeding 5,0m.
 7. W=Trench width + 300mm in undisturbed material.



PIPE BEDDING DETAILS
SCALE: 1:100



DETAILS OF PIPE PROTECTION FOR
REDUCED DEPTH OF COVER
SCALE 1:100

FOR TENDER
PURPOSES ONLY

- NOTES
1. DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED.
 2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE ENGINEER OF ANY VARIATIONS BEFORE CONSTRUCTION.

DRAWING NO. REFERENCE
REFERENCE DRAWINGS

VST CONSULTING ENGINEERS			
TITLE	NAME	SIGN	DATE
DRAWN	K.V.		20 10 26
CHECKED	D.P.		20 10 26
DESIGNED	D.P.		20 10 26
CHECKED	S.T.		20 10 26
PR. ENG. / PR. TECH. ENG			
NAME	S.T.		DATE
SIGNATURE			20 10 26
REG. NUMBER			
SCALE:	AS SHOWN		

PROJECT NUMBER				RHS				DIB				TYPE				DRAWING NO.				SHEET				REV				VST			
2				5				0				1				0				0				0				0			

VST

Consulting Engineers (Pty) Ltd

Stellenbosch Municipality

Enkanini Informal Settlement

Bedding Details

Suite 12, 2nd Floor, Orion Office Park, 49
Richeloford Circle,
Limbanga Ridge, 4320
Tel: 031 566 2131
Fax: 086 516 7445
Email: don@vst.co.za
Web: www.vst.co.za

A

B

C

D

E

F

A

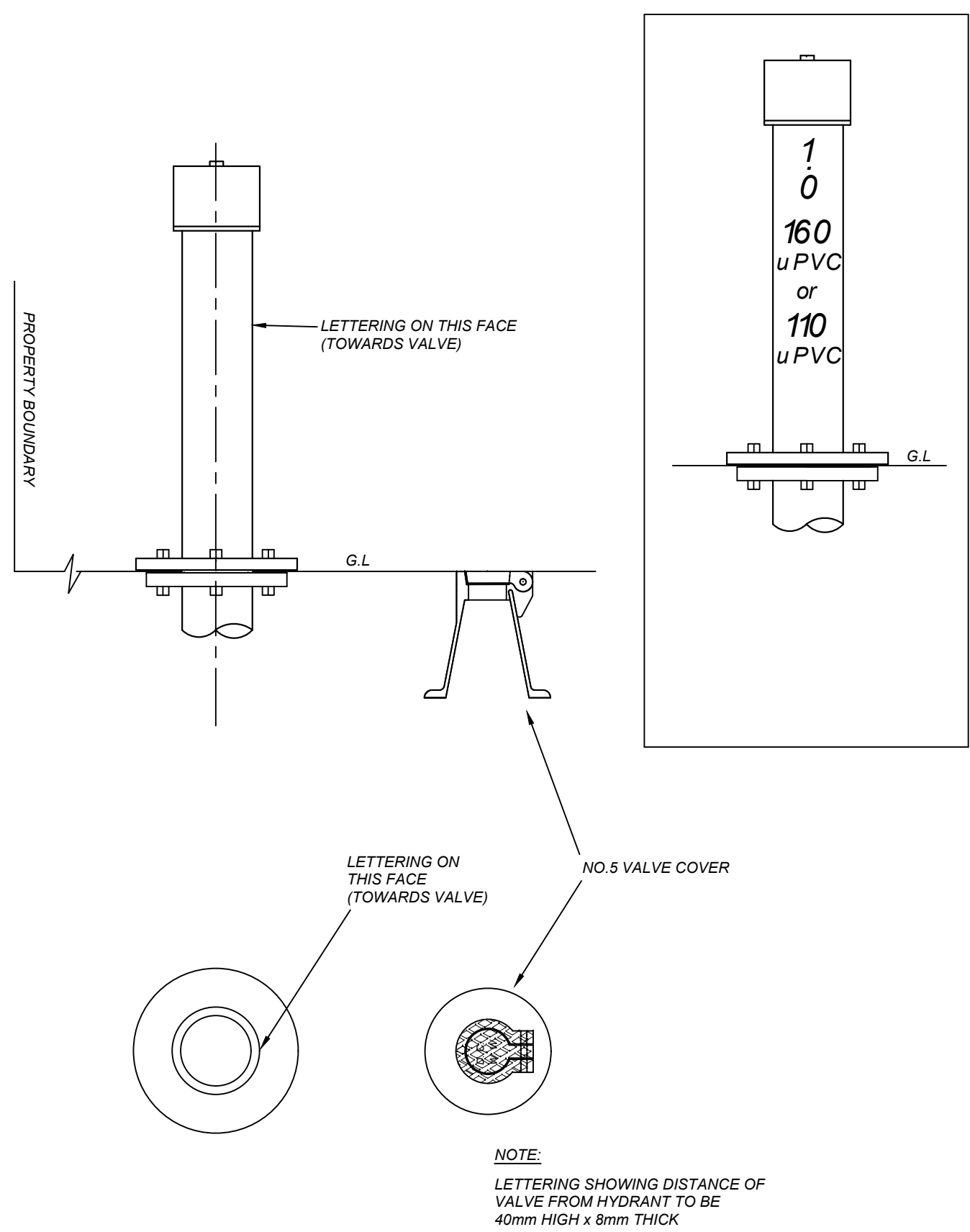
B

C

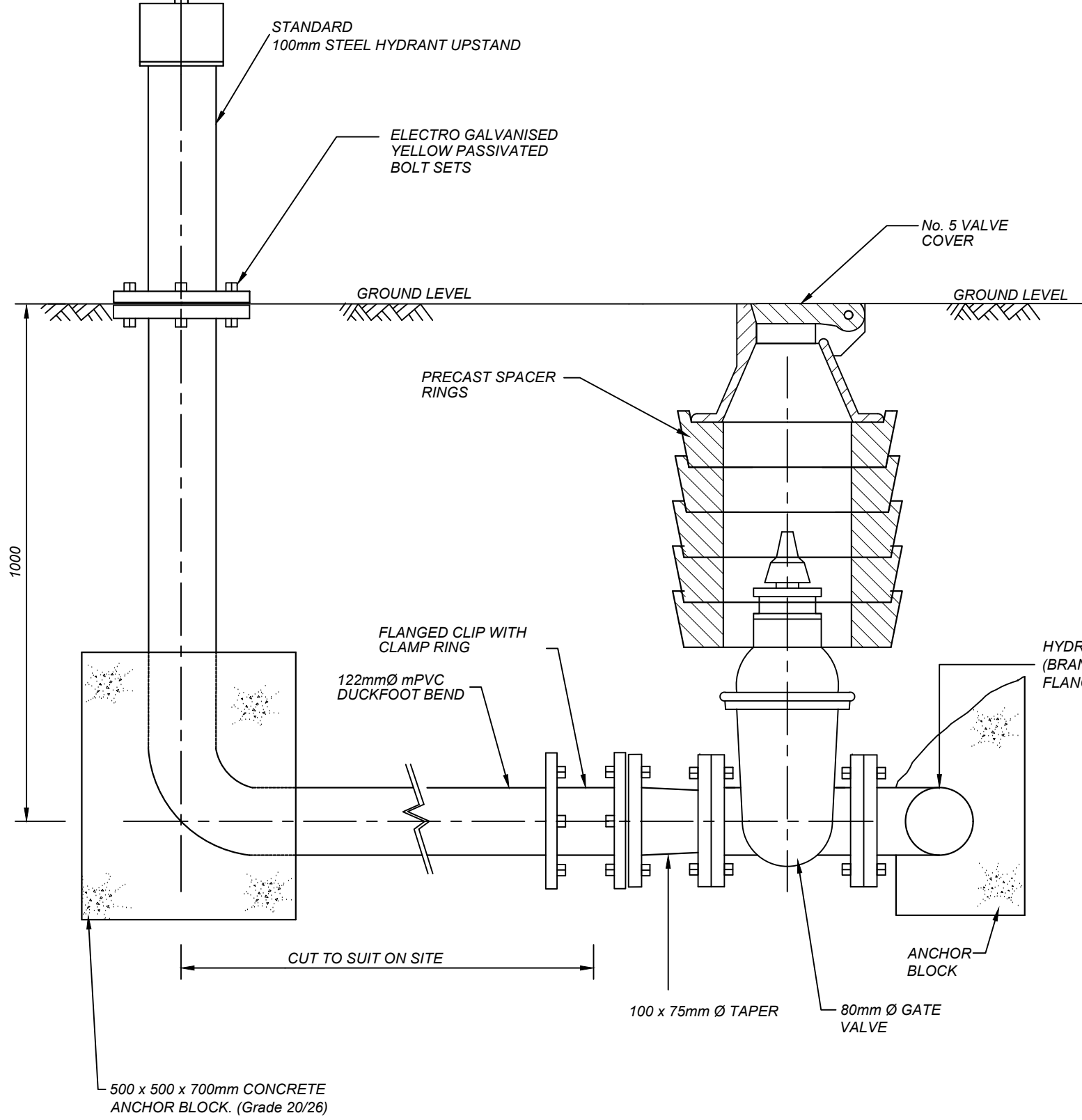
D

E

F

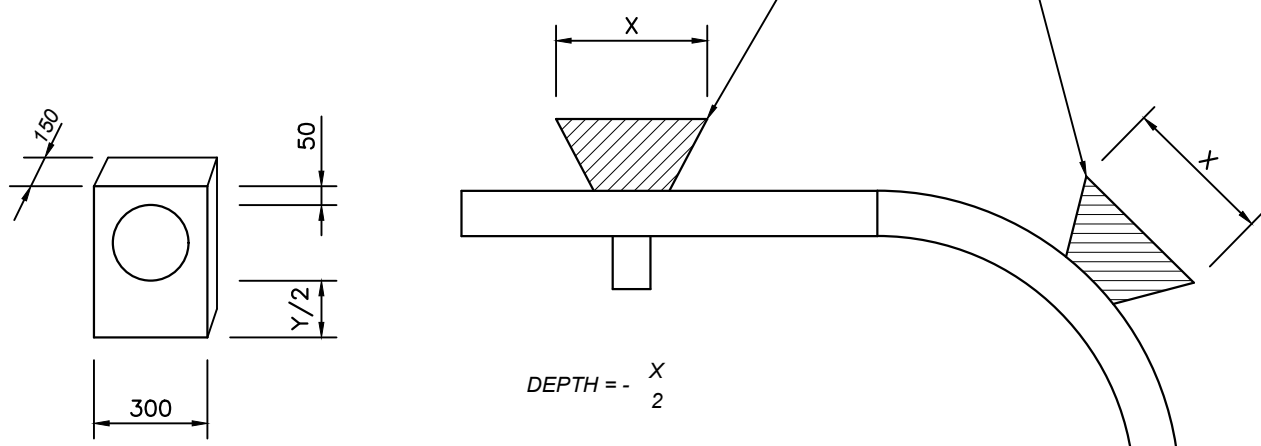


ORIENTATION OF HYDRANT VALVE COVER & LETTERING
SCALE: N.T.S.



DETAIL "D"

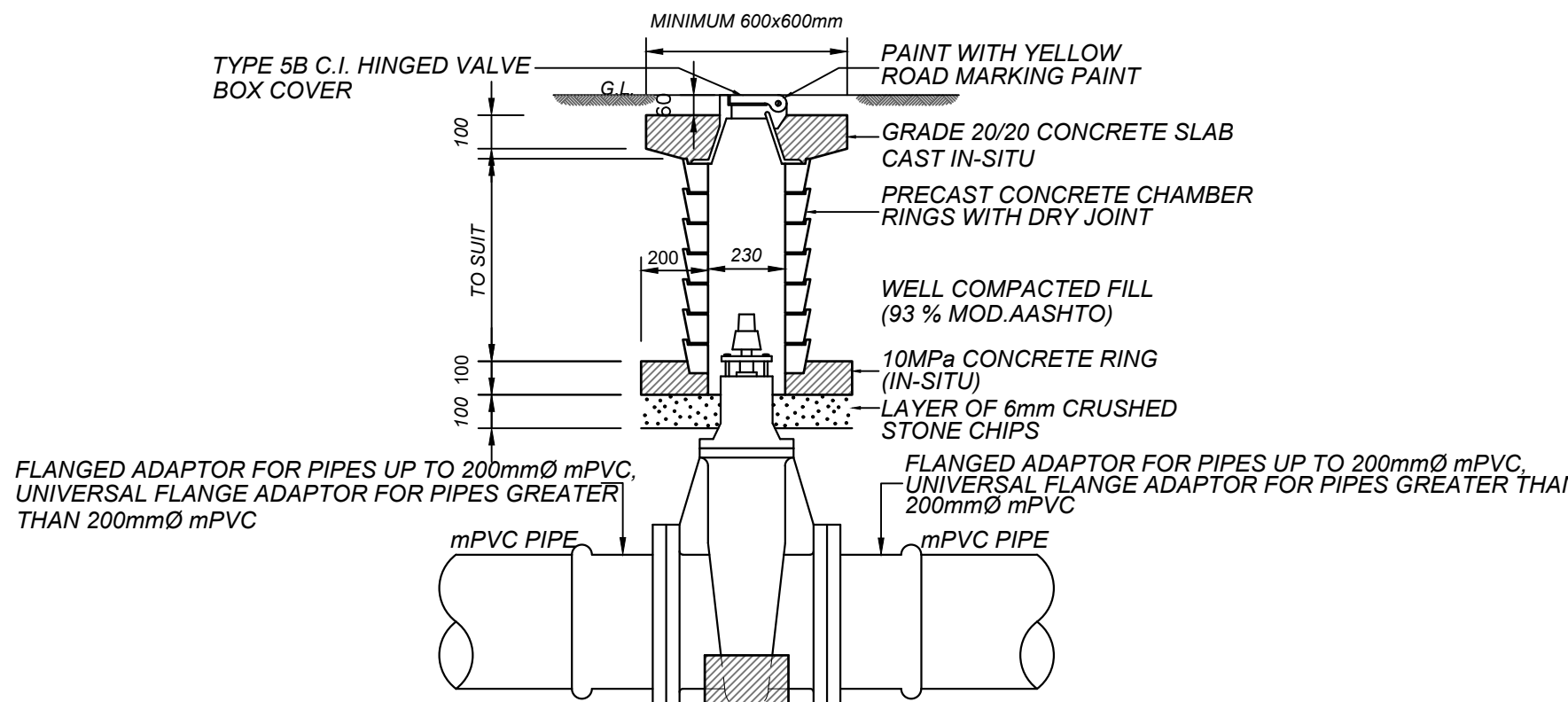
STANDARD HYDRANT DETAIL
SCALE: N.T.S.



NOTE:
1 SHOULD POOR SOIL CONDITIONS BE ENCOUNTERED, THE CONTRACTOR IS TO OBTAIN CONFIRMATION OF THRUST BLOCK SIZE FROM ENGINEER.
2 BLOCK SIZES BASED UPON SOIL WITH BEARING CAPACITY NOT LESSER THAN 150 kPa.
3 FOR TYPE 1 (CLASS 9 OR CLASS C PIPE) BLOCK SIZES BASED UPON MAXIMUM TEST HEAD OF 135m (1.5 x 30m).
4 FOR TYPE 2 (CLASS 16 OR CLASS E PIPE) BLOCK SIZES BASED UPON MAXIMUM TEST HEAD OF 240m (1.5 x 160m).

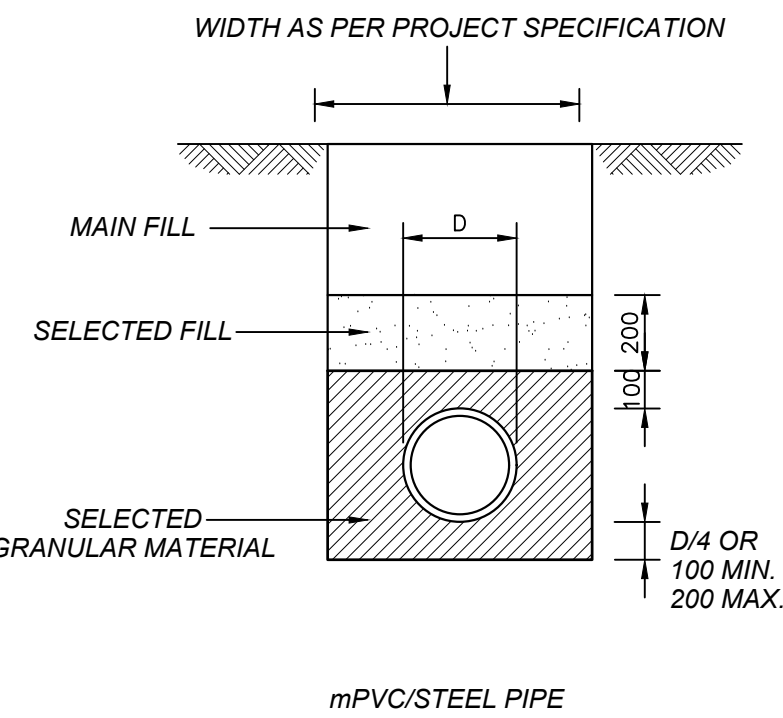
TEES (BRANCH SIZE), END CAPS, 90° BENDS	X		Y	
	TYPE1	TYPE2	TYPE1	TYPE2
50 & 63	200	350	75 - 50	160
75	340	450	100 - 75	180
90, 100, 110	450	500	100 - 50	200
150, 160	680	800	150 - 100	310
200	800	1200	150 - 75	380
250	1150	1500	150 - 50	420
300, 315	1350	1800	200 - 150	380
350	1600	2100	200 - 100	510
450	2050	2700	200 - 75	560
LESSER BENDS	TYPE1	TYPE2	250 - 200	400
	TYPE1	TYPE2	250 - 150	380
50 & 63	210	225	300 - 250	440
75	250	330	300 - 200	640
90, 100, 110	340	450	300 - 150	780
150, 160	530	700	350 - 300	470
200	680	900	350 - 250	700
250	850	1100	450 - 350	780
300, 315	1050	1400	450 - 300	970
350	1250	1650		
450	1550	2000		

DETAIL "E"
TYPICAL WATER MAIN THRUST BLOCKS
SCALE 1:20



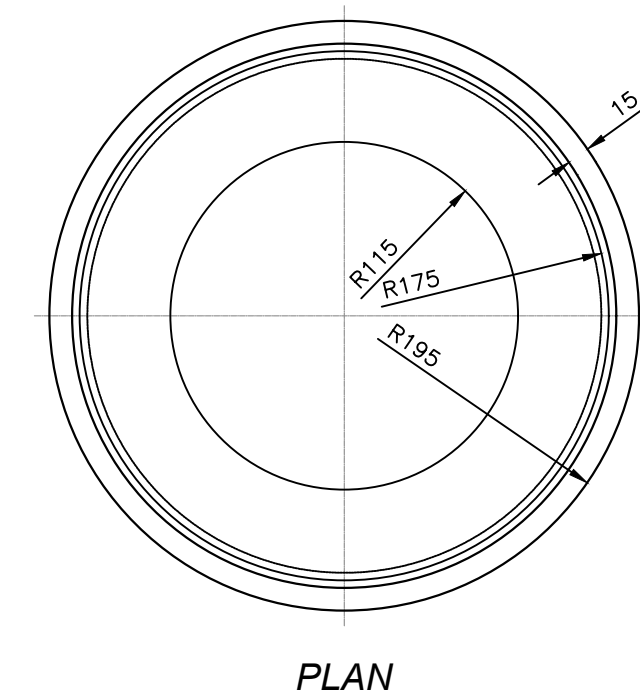
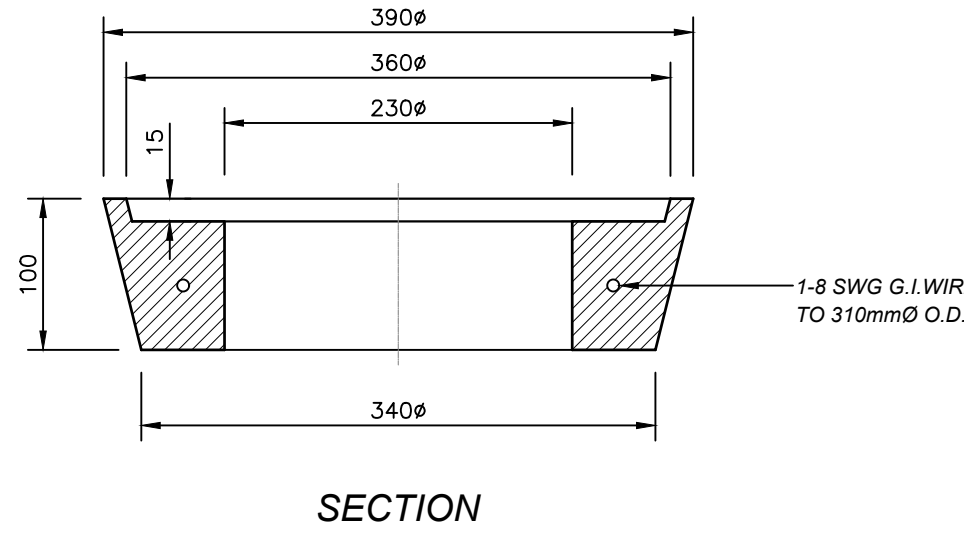
NOTES:
1 ANCHOR BLOCKS SIZES BASED UPON MAX. STATIC HEAD OF 240m AND SOIL WITH BEARING CAPACITY GREATER THAN 150 kPa.
2 SHOULD POOR SOIL CONDITIONS EXIST THE CONTRACTOR IS TO OBTAIN CONFIRMATION OF BLOCK SIZES FROM THE ENGINEER.

DETAIL "A"
PRECAST CONCRETE VALVE CHAMBER
FOR VALVE 315mmØ OR SMALLER
SCALE 1:20



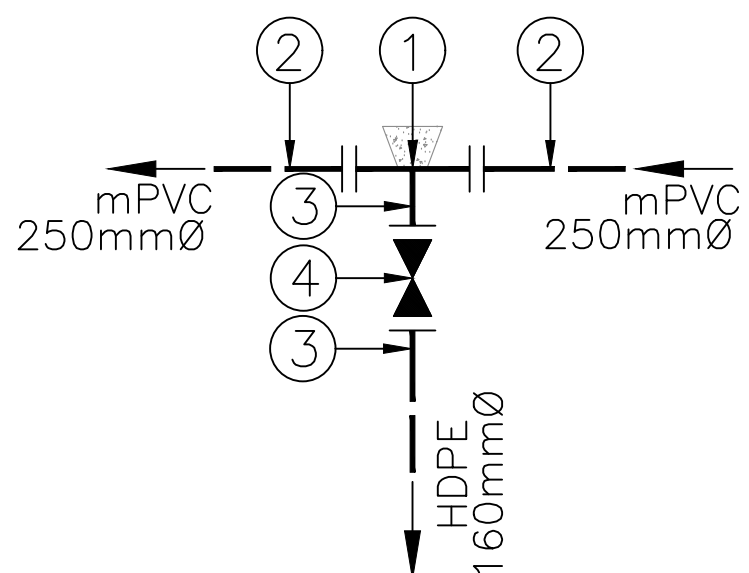
NOTES:
1 TRENCH WIDTH TO CONFORM TO STANDARDIZED SPECIFICATION-SABS 1200 DB: EARTHWORKS (PIPE TRENCHES) OR AS AMENDED IN VARIATION TO PROJECT SPECIFICATION.
2 SELECTED GRANULAR MATERIAL TO BE COMPACTED TO 93% MAASHTO DENSITY IN MAXIMUM 100mm LAYERS.
3 MAIN FILL TO BE COMPACTED TO 90% MAASHTO DENSITY IN MAXIMUM 300mm LAYERS, UNLESS OTHERWISE SPECIFIED.
4 WHERE THE TRENCH WIDTH IS WIDER THAN THAT SPECIFIED THE CONTRACTOR MAY ELECT TO POUR A CONCRETE BEDDING CRADLE TO SIDES OF TRENCH. PAYMENT WILL HOWEVER BE BASED ON THE TRENCH WIDTH SPECIFIED.

DETAIL "B"
BEDDING DETAILS FOR FLEXIBLE PIPE
SCALE 1:20



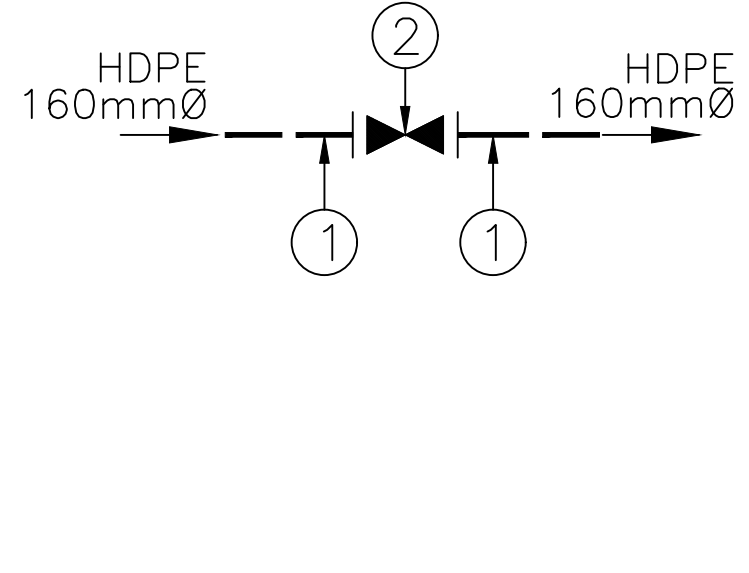
NOTE:
CONCRETE MIX 3:1 UMGENI SAND TO CEMENT
DRY MIX FINISH PRESS AND STRUCK SMOOTH.

DETAIL "F"
STANDARD PRECAST CONCRETE RINGS
FOR VALVE CHAMBERS
SCALE 1:5



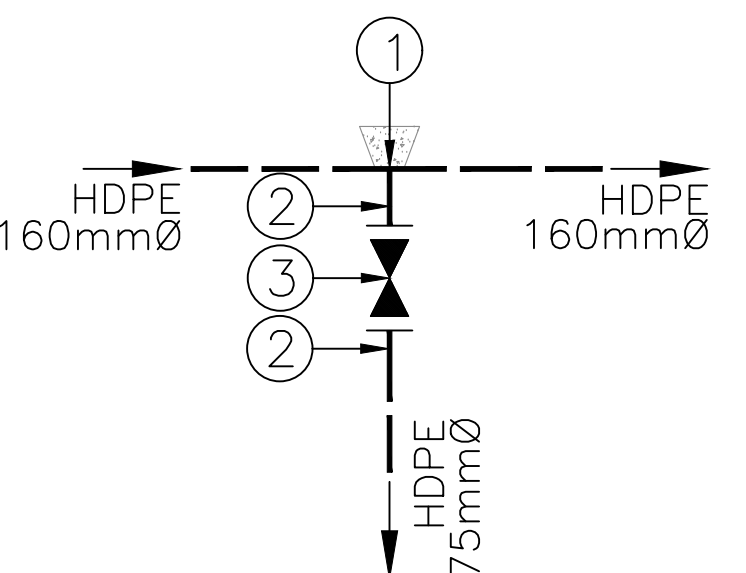
DETAIL 1

PIPEWORK DETAILS		
ITEM	DESCRIPTION	QUANTITY
1.	250x160mmØ STEEL REDUCING TEE WITH ALL ENDS FLANGED.	1
2.	250mmØ FLANGE ADAPTOR FOR mPVC PIPE.	2
3.	160mmØ FLANGE ADAPTOR FOR HDPE PIPE.	2
4.	160mmØ FLANGED ISOLATING VALVE.	1



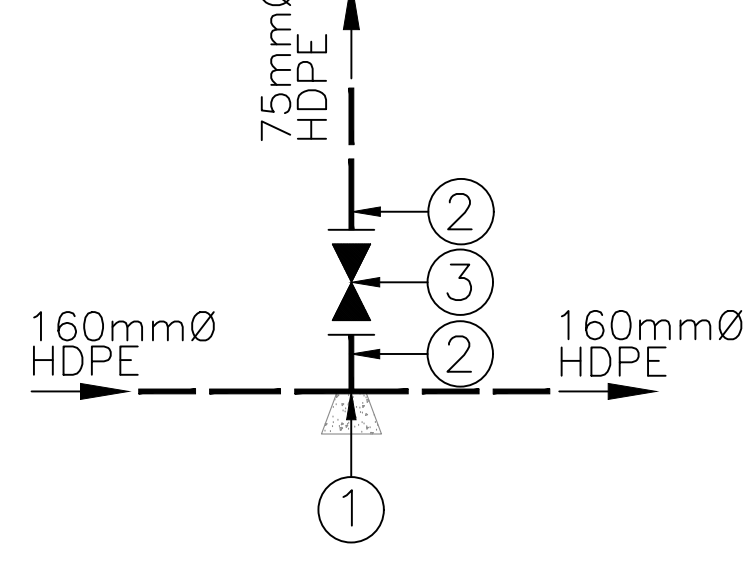
DETAIL 2

PIPEWORK DETAILS		
ITEM	DESCRIPTION	QUANTITY
1.	160mmØ FLANGE ADAPTOR FOR HDPE PIPE.	2
2.	160mmØ FLANGED ISOLATING VALVE.	1



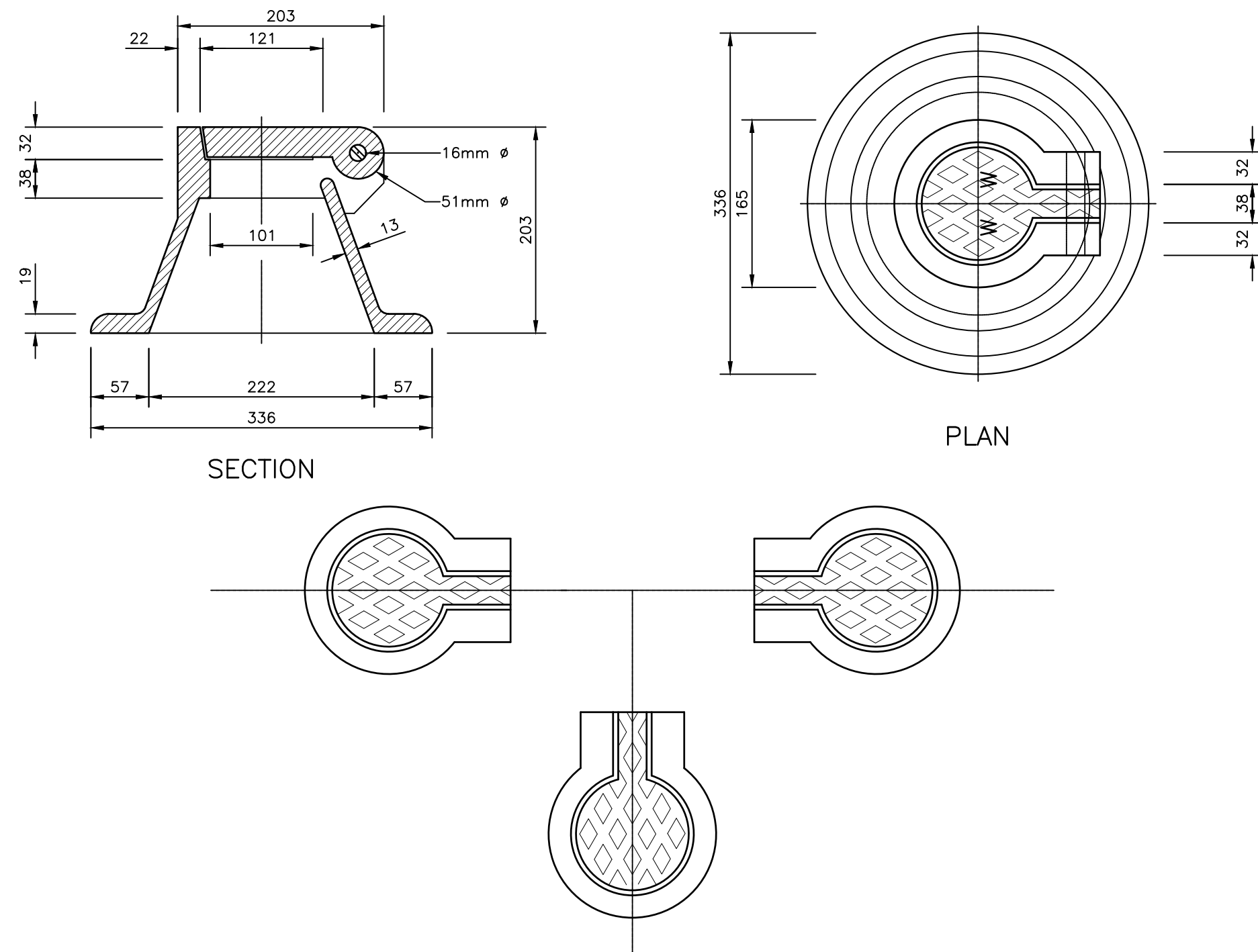
DETAIL 3

PIPEWORK DETAILS		
ITEM	DESCRIPTION	QUANTITY
1.	160x75mmØ REDUCING HDPE TEE.	1
2.	75mmØ FLANGE ADAPTOR FOR HDPE PIPE.	2
3.	75mmØ FLANGED ISOLATING VALVE.	1

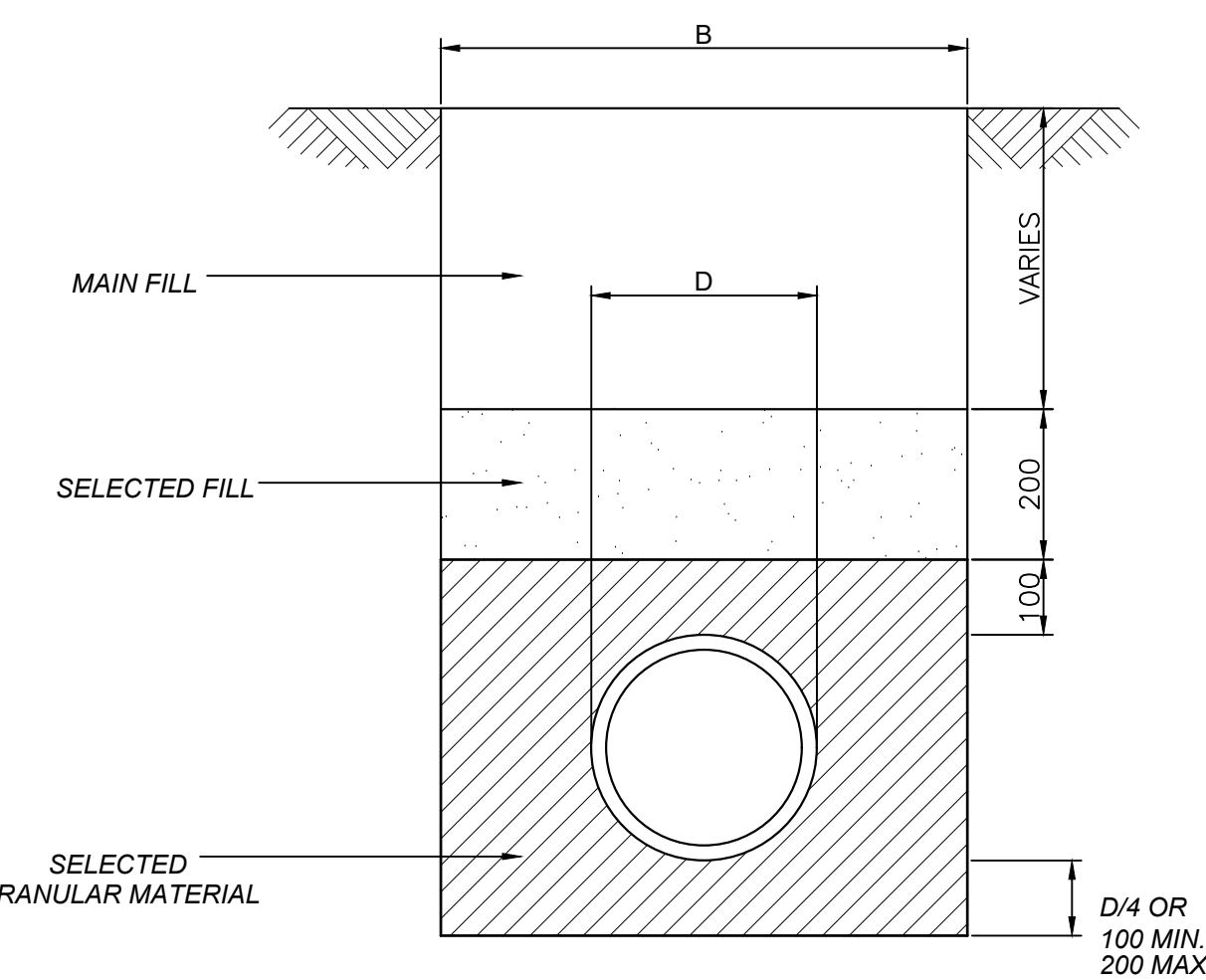


DETAIL 4

PIPEWORK DETAILS		
ITEM	DESCRIPTION	QUANTITY
1.	160x75mmØ REDUCING HDPE TEE.	1
2.	75mmØ FLANGE ADAPTOR FOR HDPE PIPE.	2
3.	75mmØ FLANGED ISOLATING VALVE.	1



DETAIL "C"
HINGED VALVE BOX COVER (TYPE 5B)
SCALE 1:5



FLEXIBLE PIPE BED

NOTES:
1 TRENCH WIDTH TO CONFORM TO STANDARDIZED SPECIFICATION-SABS 1200 DB: EARTHWORKS (PIPE TRENCHES)
2 SELECTED GRANULAR MATERIAL TO BE COMPACTED TO 93% MAASHTO DENSITY IN MAXIMUM 100mm LAYERS.
3 SELECTED FILL MATERIAL TO BE COMPACTED TO 93% MAASHTO DENSITY IN MAXIMUM 100mm LAYERS.
4 MAIN FILL TO BE COMPACTED TO 90% MAASHTO DENSITY IN MAXIMUM 300mm LAYERS, UNLESS OTHERWISE SPECIFIED.
5 WHERE THE TRENCH WIDTH IS WIDER THAN THAT SPECIFIED THE CONTRACTOR MAY ELECT TO POUR CONCRETE BEDDING CRADLE TO SIDES OF TRENCH. PAYMENT WILL HOWEVER BE BASED ON THE TRENCH WIDTH SPECIFIED.

DETAIL "A"
BEDDING DETAILS
SCALE 1:10

FOR TENDER
PURPOSES ONLY

NOTES:
1. DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE ENGINEER OF ANY VARIATIONS BEFORE CONSTRUCTION.

DRAWING NO. REFERENCE
REFERENCE DRAWINGS

00 FOR TENDER
NO. DESCRIPTION
KV DP ST
BY CHKD APPD DATE
20-10-26
REVISIONS
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VST CONSULTING ENGINEERS
TITLE NAME SIGN DATE
DRAWN K.V. 20 10 26
CHECKED D.P. 20 10 26
DESIGNED D.P. 20 10 26
CHECKED S.T. 20 10 26
PR. ENG. / PR. TECH. ENG
NAME S.T. DATE
SIGNATURE 20 10 26
REG. NUMBER
SCALE: AS SHOWN

Suite 12, 2nd Floor, Orion Office
Park, 49 Richeford Circle,
Umhlanga Ridge, 4320
Tel: 031 566 2131
Fax: 086 516 7445
Email: dm@vst.co.za
Web: www.vst.co.za
Consulting Engineers (Pty) Ltd.
DESIGN DEVELOPMENT
STELLENBOSCH MUNICIPALITY
ENKANINI INFORMAL SETTLEMENT
CONNECTION DETAILS
PROJECT NUMBER WBS DIS TYPE DRAWING NO. SHEET REV ID
A02501141 001 05 T D 0009 11000 VST

GENERAL LAYOUT

The general layout of the project notice board provides for a project title field in which the project is described and the client is identified. Below the project title field the board is divided into three vertical areas. The left hand side of this area is reserved for the seals/logos of the constituents of the BEP Grouping whose members may be commissioned to deliver professional services to the project. The central area is for listing the professional consultants on the project and the right hand area may be used for displaying individual company logos and any additional affiliation which the consultant may have in the BEP Grouping eg dual membership of SAIA and SABTACO.

RECOMMENDATIONS:

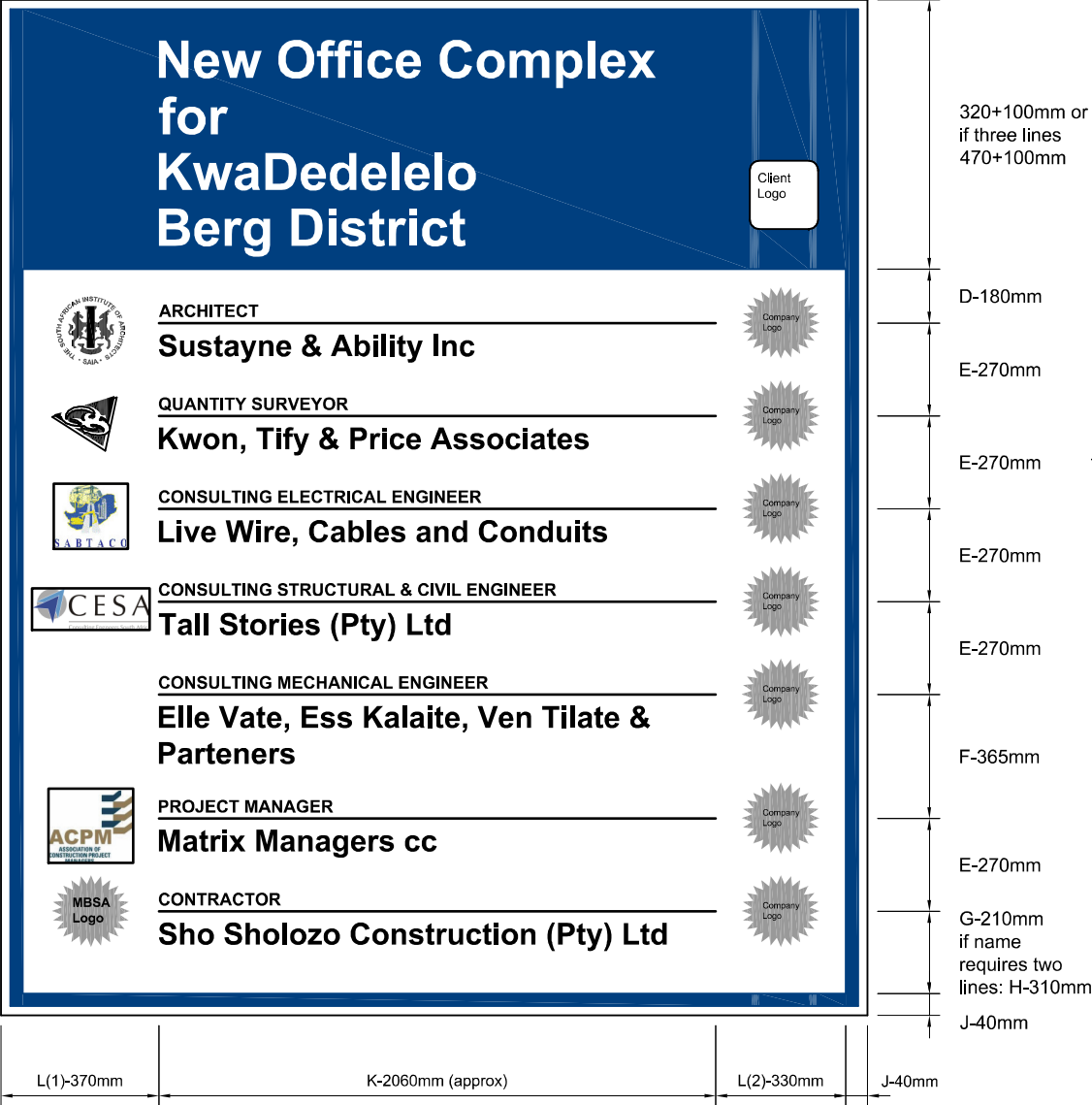
- 1
- The names of all professional consultants involved in the project and the main contractor should be displayed on the project notice board.
- 2
- Only bone fide members of the five constituents of the Built Environment Professions Grouping (ACPM, ASAQS, CESA, SABTACO and SAIA) may apply their association's seal/logo to the notice board.
- 3
- When applied, this seal/logo is placed to the left of the named discipline and consultant, centered in the vertical space provided and central on the horizontal line separating the discipline name from the consultant's name.
- 4
- Where a consultant is a member of more than one of the five BEP Grouping associations, the consultant may elect to display both associations' seals/logos. I this case, one appropriate seal is selected for display on the left hand side of the board while the other seal is displayed on the right hand side above the consultant's own logo (see item 7 below) – vertical spacing of the logos may require adjustment.
- 5
- Where the contractor is a member of MBSA or SAFCEC these seals may be applied in the same way as the professional associations' seals, ie to the left of the named contractor (see item 3 above).
- 6
- All parties are entitled to apply individual company logos in association with their names.
- 7
- When applied, the consultants' logos are placed to the right of the named discipline and consultant, centered in the vertical space provided and central on the horizontal line separating the discipline name from the consultant's name.
- 8
- The client's seal/logo is placed to the right hand side of the client's name in the bottom right hand portion of the project title field.
- 9
- Seals/logos may either all be in full colour and reproduced faithfully according to specification of the association/orgnaisation represented, or all in black and white , as may be agreed by the parties concerned. It is the responsibility of each consultant to ensure that the appropriate information is provided.
- 10
- Seals/logos may either be provided in suitable electronic form or as print media, eg seal logo to full size, printed on transparent, adhesive media as supplied by the associations
- 11
- Variations which determine the height of the board are indicated.
- 12
- The signwriter should be issued with the relevant information for the board as well as copies of recommendation in hardcopy form. Alternatively the signwriter may be issued with the information in electronic form as long as these recommendations are clearly stated and followed.
- 13
- Where the architect is not architect, principal consultant and principal agent, the order in which the parties are listed on the project board is by mutual agreement. The contractor is generally the last name to be listed.

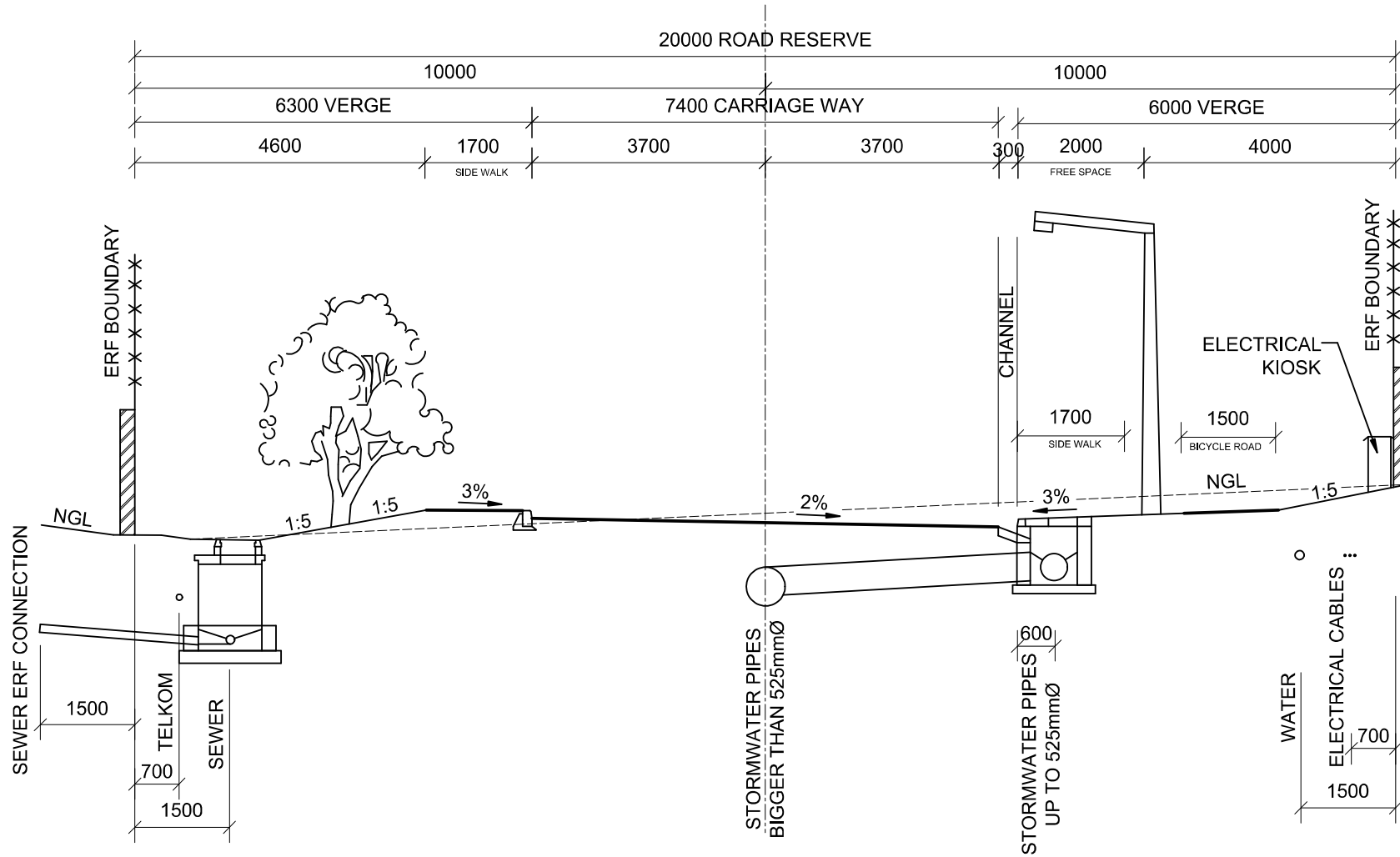
TECHNICAL DATA

LETTERING & SETTING OUT:	TITLE BLOCK	100mm Arial bold upper and lower case letters in white.
	NAMES OF PRACTICES & FIRMS	75mm Arial bold upper and lower case letters in black.
	PROFFESIONAL TITLES	Allow 100mm between bottom of line and bottom of lettering.
		50mm Arial bold upper case letters only in black.
		Allow 10mm between line and professional titles.
	HORIZONTAL LINE	8mm thick in black

BORDERS, FIELDS & SEALS/LOGOS	OUTER BORDER	Dimension: 8mm wide Colour: White
	INNER BORDER	Dimension: 24mm wide Colour: Blue to match RGB 3;91;51 (R:3, G:91, B:151)
	TITLE BLOCK FIELD	Dimension: As specified below Colour: Blue to match RGB 3;91;51 (R:3, G:91, B:151)
	CONSULTANTS/ CONTRACTOR FIELDS	Dimension: As specified below Colour: White
	SEAL/LOGO ACTUAL SIZES	The full-size SAIA logo is 190mm diameter (reference dimension) - other seals/logos to be scaled accordingly

LEGEND:	A	170mm	The dimension from the top of the board to the bottom of the letters on the first line of the title block.
	B	320mm	The dimension from the top of the board to the bottom of the letters on the second line of the title block.
	C	470mm	The dimension from the top of the board to the bottom of the letters on the third line of the title block (if the title requires three lines)
	D	180mm	This dimension is standard, and is to the centre of the horizontal line.
	E	270mm	This dimension is standard if only one line is required for the practice name.
	F	365mm	This dimension is typical if two lines are required for the practice name.
	G	210mm	This dimension should be used where the last practice on the board requires only one line.
	H	310mm	This dimension should be used where the last practice on the board requires two lines.
	J	40mm	White border: 8mm wide Blue border: 32mm wide The blue border shall have a radius of 60mm to the corners.
	K	2060mm	This is an approximate dimension.
	L(1)	370mm	Allow: 40mm white and blue borders 330mm width for professional associations, contractors seals/logos
	L(2)	330mm	Net width for individual company logos





STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

TYPICAL LAYOUT OF SERVICES IN 20m ROAD RESERVE

Scale

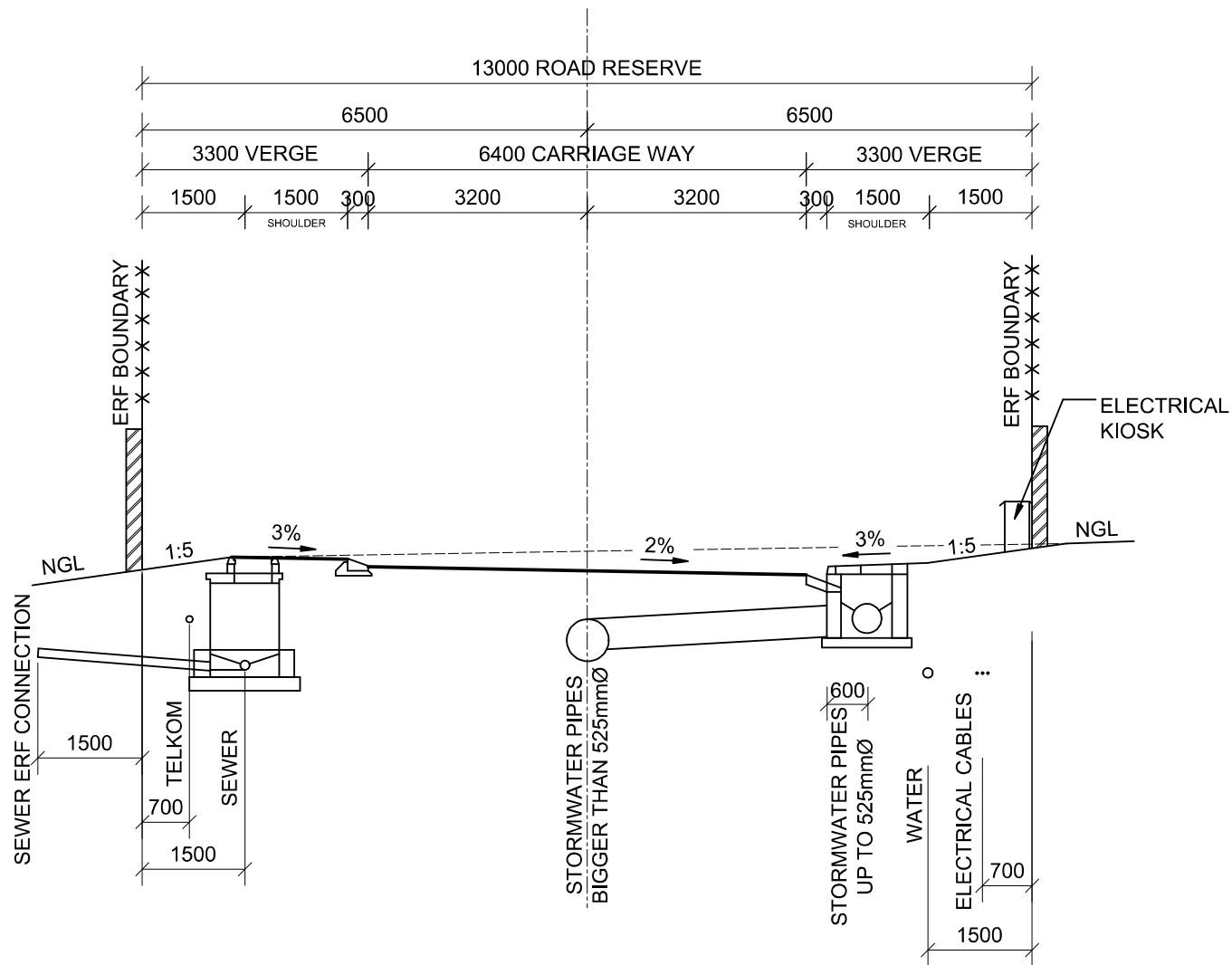
1:100

Paper Size

A4

Drawing No.

SG2



STELLENBOSCH

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STANDARD DETAIL DRAWING

TYPICAL LAYOUT OF SERVICES IN 13m ROAD RESERVE

Scale

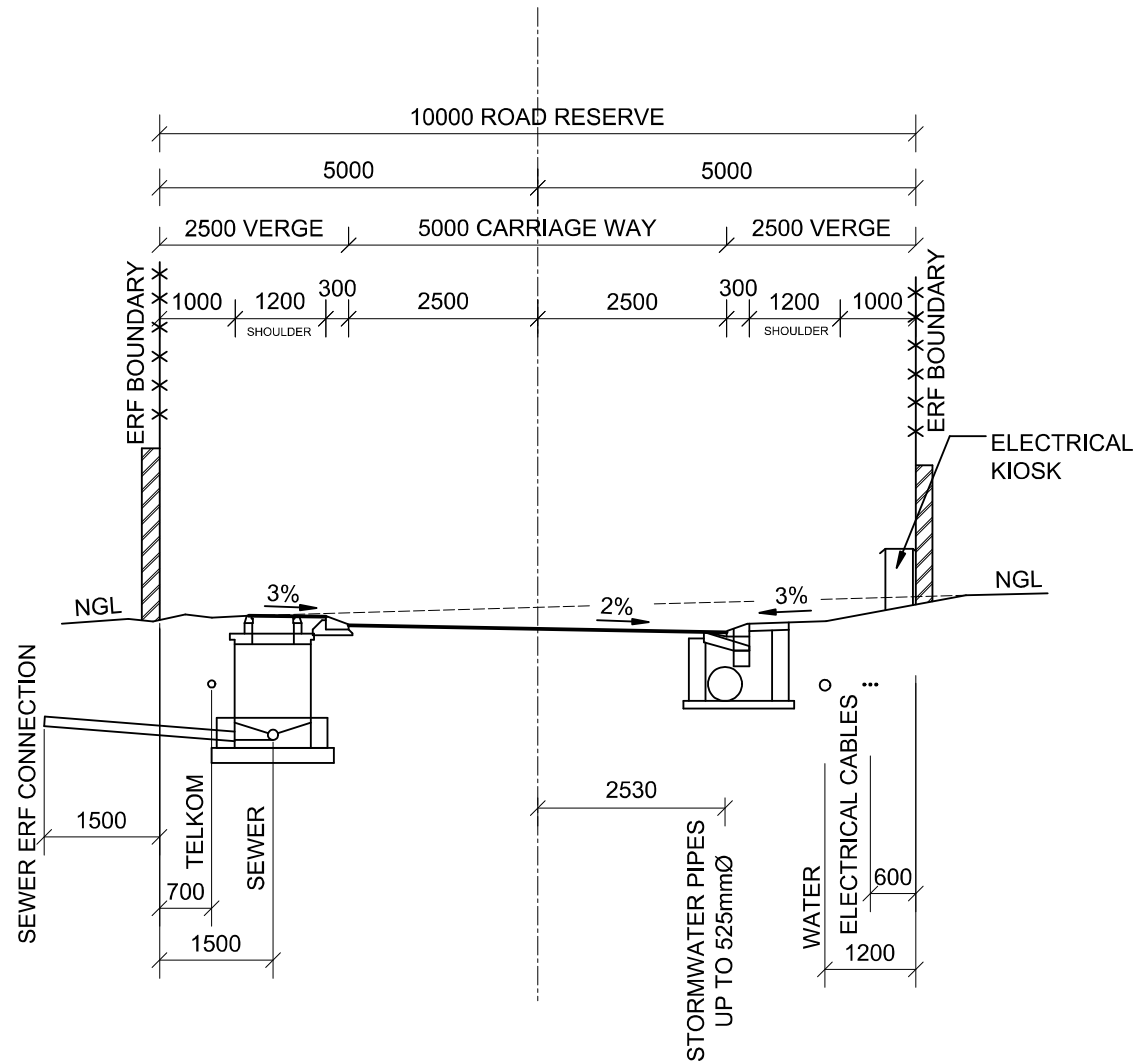
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Paper Size

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Drawing No.

SG4



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STANDARD DETAIL DRAWING

TYPICAL LAYOUT OF SERVICES IN 10m ROAD RESERVE

Scale

1:100

Paper Size

A4

Drawing No.

SG5

SERVICES TYPE	LETTERING (CUT IN KERB WITH GRINDER)	COLOUR (OF LETTERING)	SPECIFICATIONS	EXAMPLES
DUCTS				
TELKOM	T	GREEN	CUT LETTERING ON KERB FACE WITH GRINDER, 75mm HIGH x 5mm THICK. PAINT LETTER WITH POLY-ACRYLIC ROOF PAINT.	
ELECTRICAL	E	RED		
TRAFFIC	R	YELLOW		
PARKS (IRRIGATION)	P	BLACK		
WATERMAINS - NOTE FOR ROUTE MARKERS AND VALVE AND HYDRANT MARKERS OUT OF ROAD RESERVES OR TOO FAR FROM KERBS - SEE DRAWING NO. SG7				
VALVE	V	WHITE	BLUE COVER FOR CHAMBER. PAINT ONE KERB (1M) BLUE (WITH POLY ACRYLIC ROOF PAINT) CUT LETTERING ON KERB FACE WITH GRINDER, 75MM HIGH x 5MM THICK. PAINT LETTER WITH POLY-ACRYLIC ROOF PAINT. OPTIONAL EXTRA: BLUE ROAD STUD ON CENTRE LINE OF ROAD – FIXED TO SURFACE WITH EPOXY.	
FIRE HYDRANT	FH	WHITE	YELLOW COVER FOR CHAMBER. PAINT ONE KERB (1m) YELLOW (WITH POLY ACRYLIC ROOF PAINT) CUT LETTERING ON KERB FACE WITH GRINDER, 75mm HIGH X 5mmTHICK. PAINT LETTER WITH POLY-ACRYLIC ROOF PAINT. PAINT FH SYMBOL ON ROAD SURFACE NEXT TO KERB USING YELLOW ROAD MARKING PAINT (TO SANS 731).	

			OPTIONAL EXTRA: YELLOW ROAD STUD ON CENTRE LINE OF ROAD – FIXED TO SURFACE WITH EPOXY.	
HOUSE CONNECTIONS				
SEWER	SINGLE GROOVE	BROWN	<p>CUT SINGLE GROOVE ON KERB FACE WITH GRINDER 75mm HIGH X 5mm THICK. PAINT GROOVE WITH POLY-ACRYLIC ROOF PAINT.</p> <p>MARKER POSTS: INSTALL 1200mm X 50mm X 50mm TIMBER POST PAINTED BROWN PROTRUDING 500mm ABOVE FINISHED GROUND LEVEL AT CONNECTION POINT. REFER TO DRAWING NO SS14</p>	
WATER	SINGLE GROOVE	BLUE	<p>CUT SINGLE GROOVE ON KERB FACE WITH GRINDER 75mm HIGH X 5mm THICK. PAINT GROOVE WITH POLY-ACRYLIC ROOF PAINT.</p> <p>MARKER POSTS: INSTALL 1200mm X 50mm X 50mm TIMBER POST PAINTED BLUE PROTRUDING 500mm ABOVE FINISHED GROUND LEVEL AT CONNECTION POINT. REFER TO DRAWING NO. SW10</p>	
ELECTRICAL	SINGLE GROOVE	RED	CUT SINGLE GROOVE ON KERB FACE WITH GRINDER, 75mm HIGH X 5mm THICK. PAINT GROOVE WITH POLY-ACRYLIC ROOF PAINT.	

NOTE: POLY ACRYLIC ROOF PAINT TO BE USED ON CONCRETE SURFACES



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STANDARD DETAIL DRAWING

SERVICES MARKINGS

Scale

N.T.S.

Paper Size

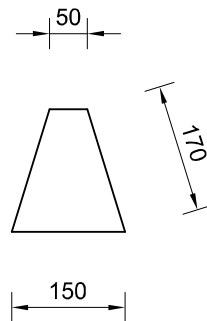
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Drawing No.

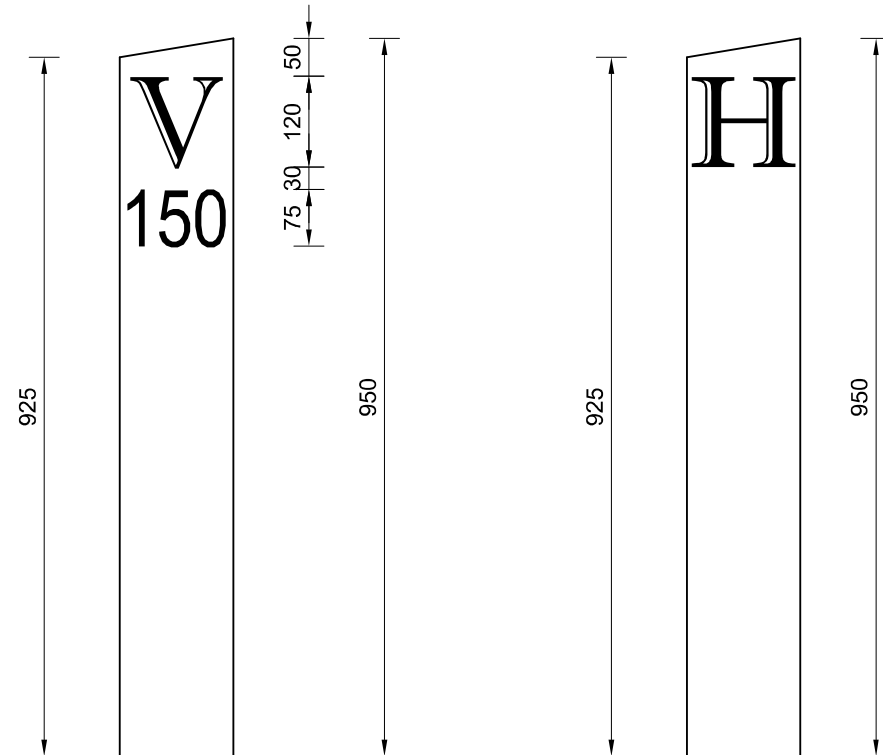
SG6

NOTES:

1. ROUTE, VALVE AND HYDRANT MARKERS, OUT OF ROAD RESERVES OR TOO FAR FROM KERBS.
2. POST MUST BE SET IN 300x300x200mm CONCRETE BASE (20MPa) AND PROTRUDE 500mm ABOVE GROUND.
3. REINFORCE MARKER WITH 1xY10 BAR IN CENTRE (875mm LONG).
4. VALVE AND ROUTE MARKERS SHALL ALSO INDICATE PIPE DIAMETER IN MILLIMETERS.
5. NON REFLECTORIZED PAINT SHALL BE USED ACC. TO SABS 731 COLOUR SPECIFICATIONS:
 - 5.1. MARKER - BLUE (EXPOSED SECTION TO BE PAINTED TO 100mm BELOW NATURAL GROUND LEVEL); HYDRANT - YELLOW
 - 5.2. LETTERING - WHITE
6. PIPE ROUTE MARKERS
 - 6.1. SAME AS VALVE MARKER - REPLACE "V" WITH "W"
 - 6.2. EVERY 50m AND CHANGE IN DIRECTION



PLAN



ELEVATION



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STANDARD DETAIL DRAWING

ROUTE, VALVE AND HYDRANT MARKERS OUTSIDE ROAD RESERVES
OR TOO FAR FROM KERBS

Scale

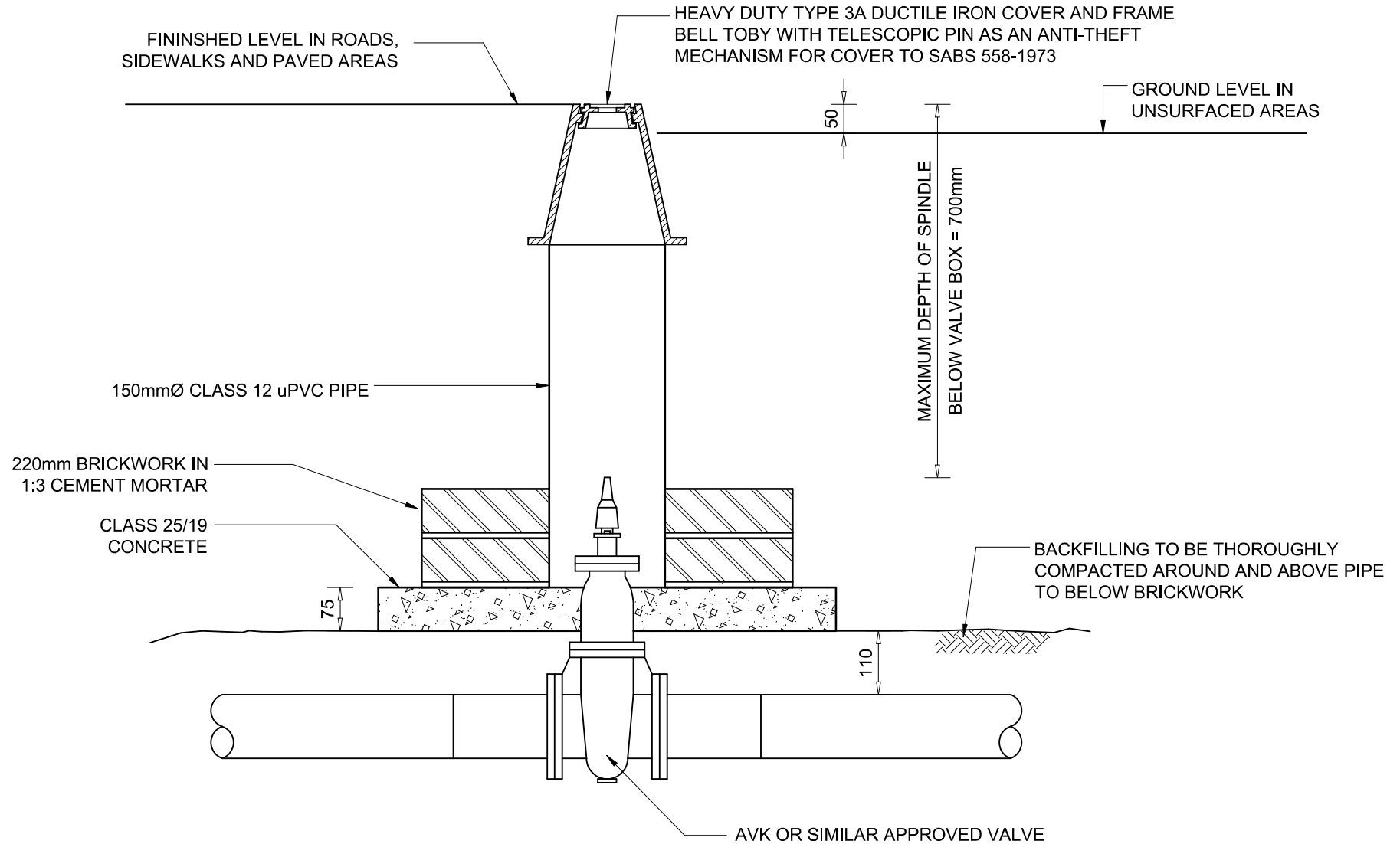
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Paper Size

A4

Drawing No.

SG7



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STANDARD DETAIL DRAWING

VALVE CHAMBER

Scale

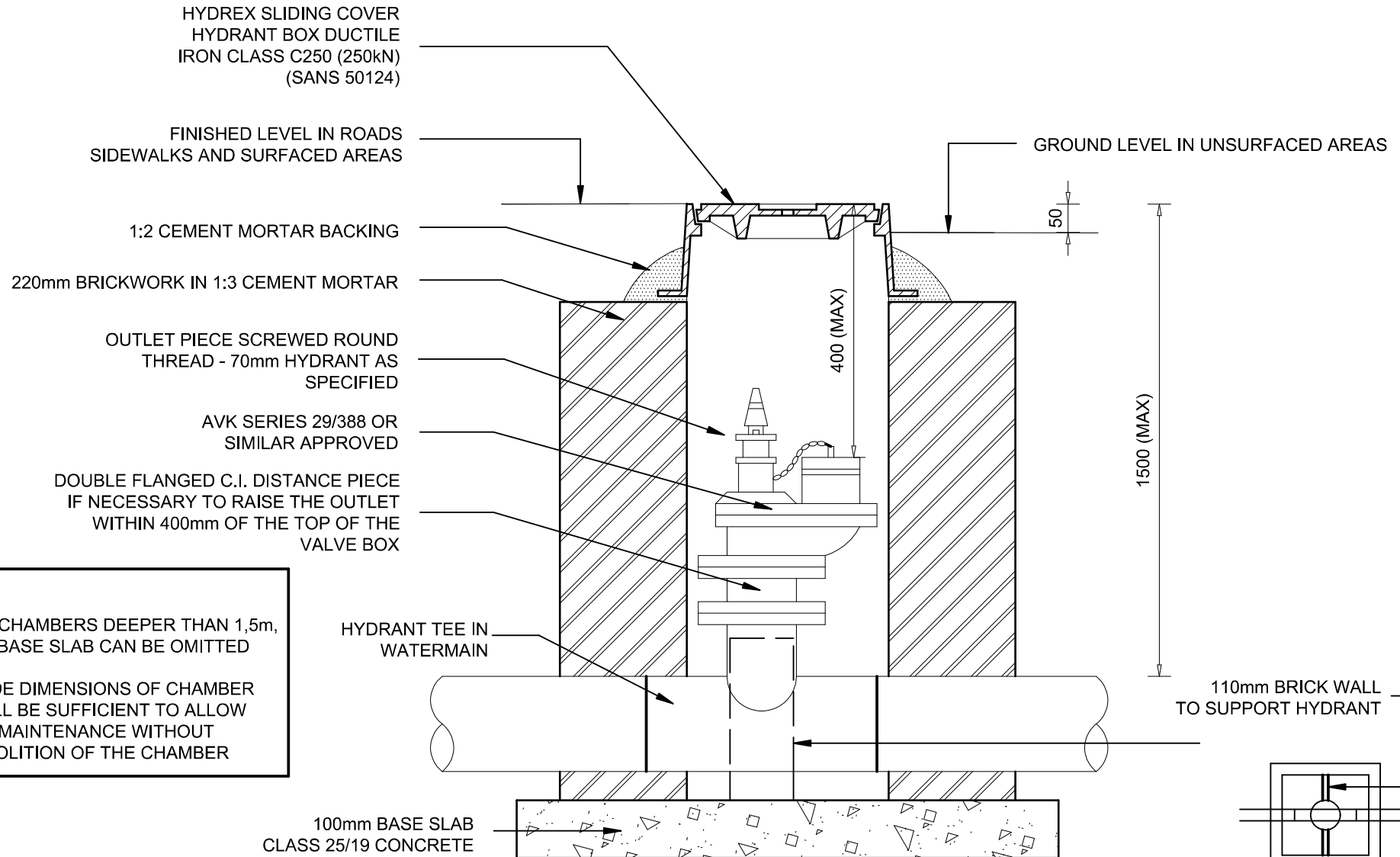
1 : 10

Paper Size

A4

Drawing No.

SW1



NOTES :

1. FOR CHAMBERS DEEPER THAN 1,5m,
THE BASE SLAB CAN BE OMITTED
2. INSIDE DIMENSIONS OF CHAMBER
SHALL BE SUFFICIENT TO ALLOW
FOR MAINTENANCE WITHOUT
DEMOLITION OF THE CHAMBER



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STANDARD DETAIL DRAWING

FIRE HYDRANT CHAMBER

Scale

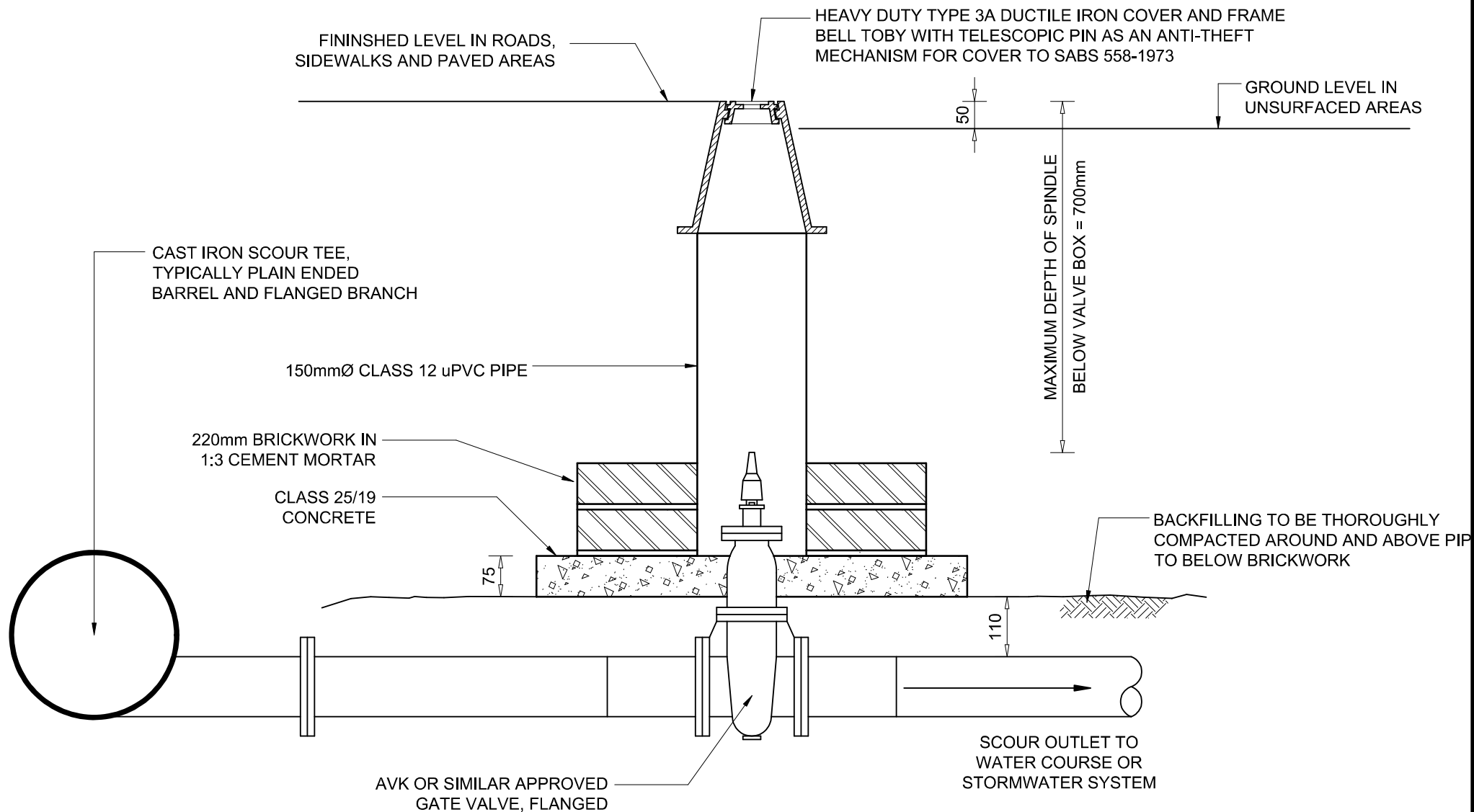
1 : 10

Paper Size

A4

Drawing No.

SW2



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STANDARD DETAIL DRAWING

SCOUR VALVE CHAMBER

Scale

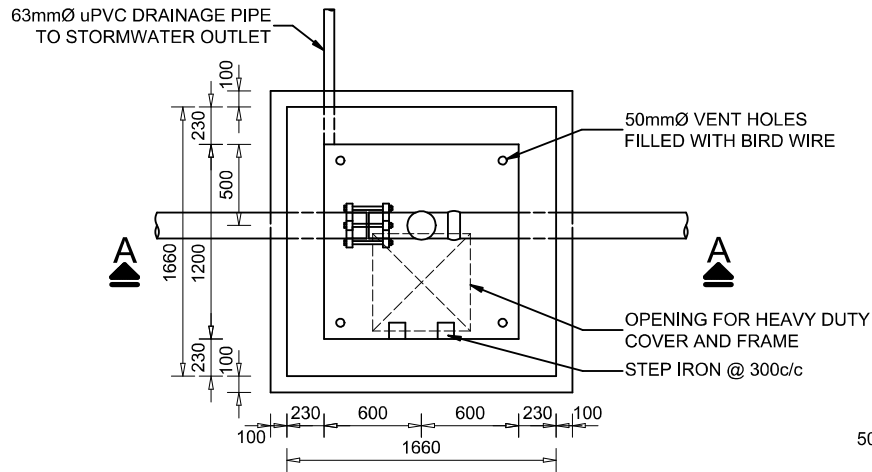
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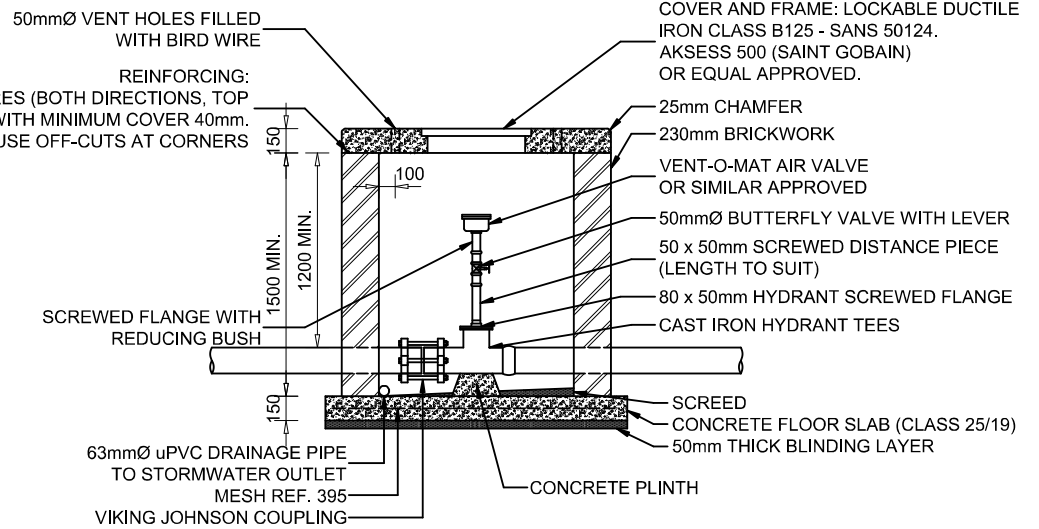
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Drawing No.

SW3



PLAN



SECTION A - A



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STANDARD DETAIL DRAWING

SINGLE AIR VALVE CHAMBER

Scale

N.T.S.

Paper Size

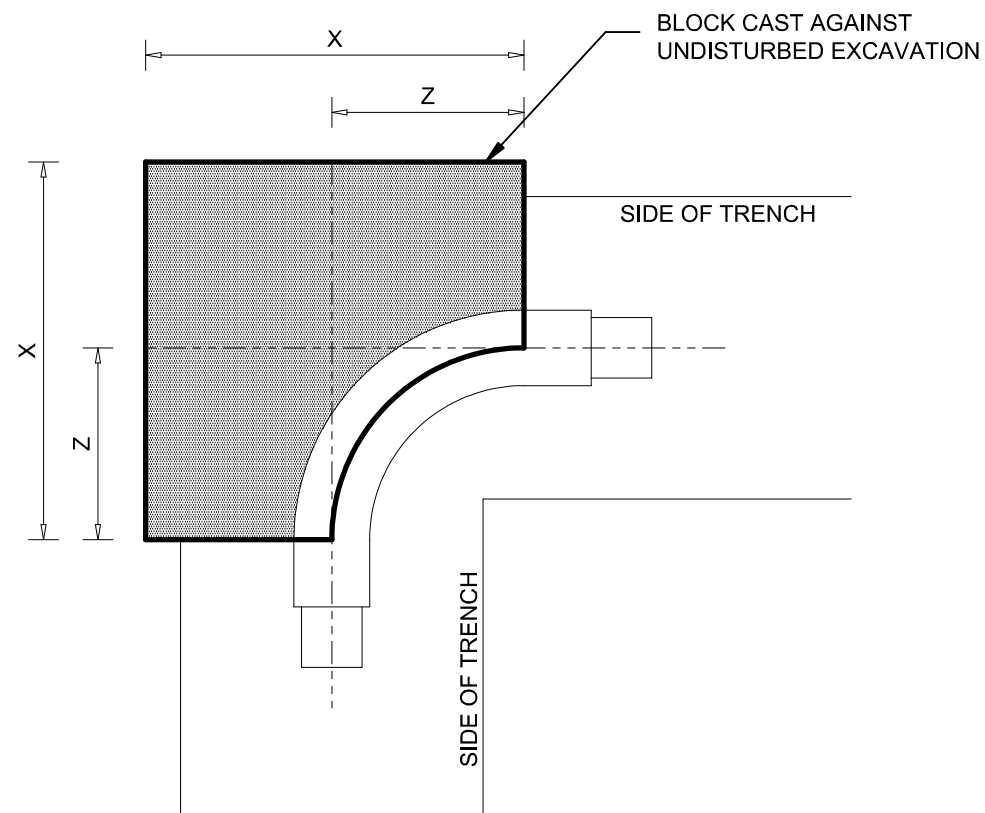
A4

Drawing No.

SW4

PIPE DIAMETER	X	DEPTH OF BLOCK	Z
300	1950	1200	575
250	1625	1000	550
200	1300	800	475
150	1000	600	400
100	650	400	250
75	500	300	175
50	325	200	125

BEARING PRESSURE OF SOIL BEHIND
THRUST BLOCK MUST BE AT LEAST 40 kPa
AND THE TEST PRESSURE HEAD IN PIPELINE
NOT BIGGER THAN 135m



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STANDARD DETAIL DRAWING

THRUST BLOCK FOR 90° BENDS

Scale

N.T.S.

Paper Size

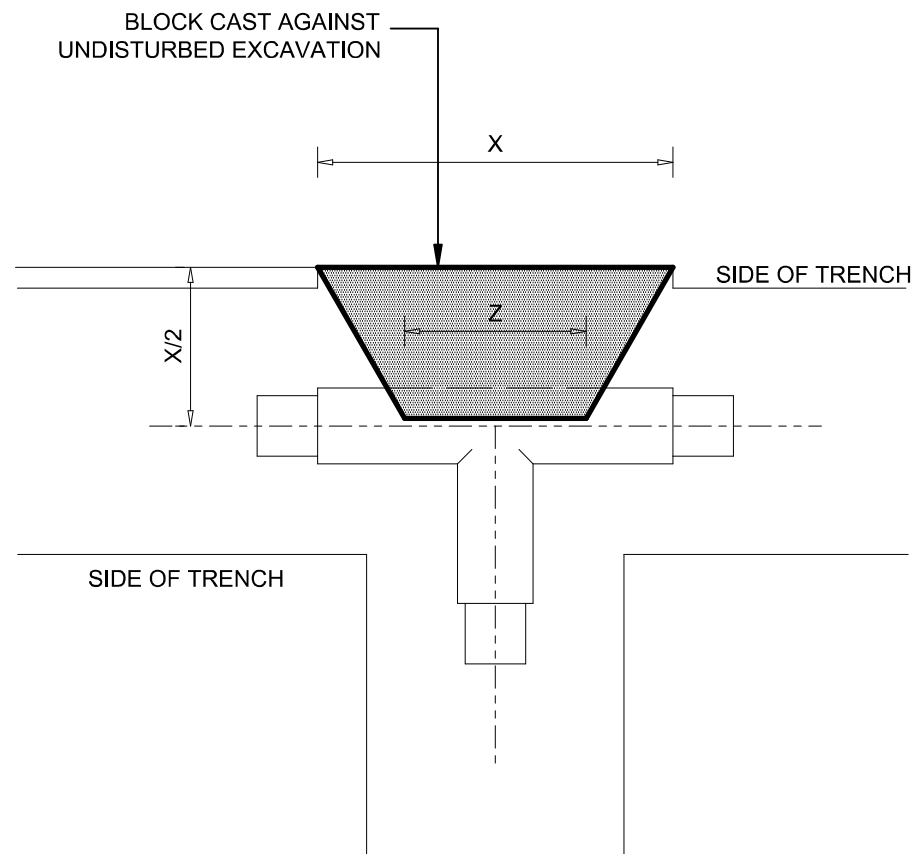
A4

Drawing No.

SW5

PIPE DIAMETER	X	DEPTH OF BLOCK	Z
300	1950	1200	550
250	1625	1000	450
200	1300	800	350
150	1000	600	275
100	650	400	200
75	500	300	150
50	325	200	100

BEARING PRESSURE OF SOIL BEHIND
THRUST BLOCK MUST BE AT LEAST 40 kPa
AND THE TEST PRESSURE HEAD IN PIPELINE
NOT BIGGER THAN 135m



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STANDARD DETAIL DRAWING

THRUST BLOCK FOR TEES

Scale

N.T.S.

Paper Size

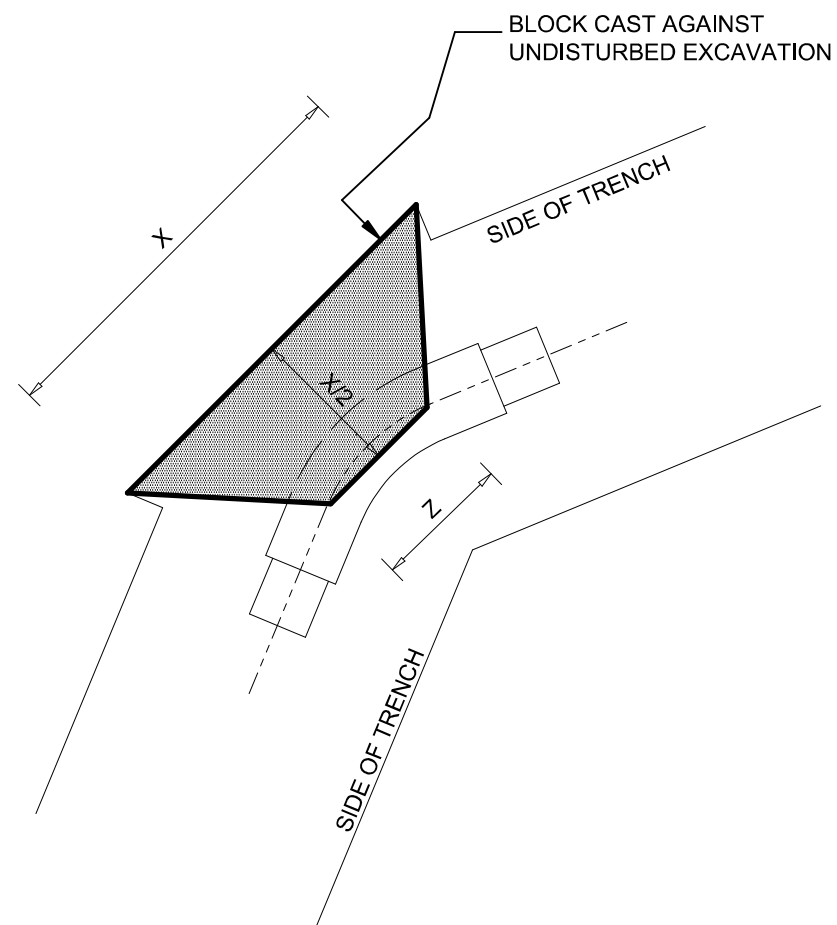
A4

Drawing No.

SW6

PIPE DIAMETER	X	DEPTH OF BLOCK	Z
300	1500	1200	375
250	1250	1000	350
200	1000	800	325
150	750	600	275
100	500	400	175
75	375	300	125
50	250	200	75

BEARING PRESSURE OF SOIL BEHIND
THRUST BLOCK MUST BE AT LEAST 40 kPa
AND THE TEST PRESSURE HEAD IN PIPELINE
NOT BIGGER THAN 135m



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STANDARD DETAIL DRAWING

THRUST BLOCK FOR 45° BENDS

Scale

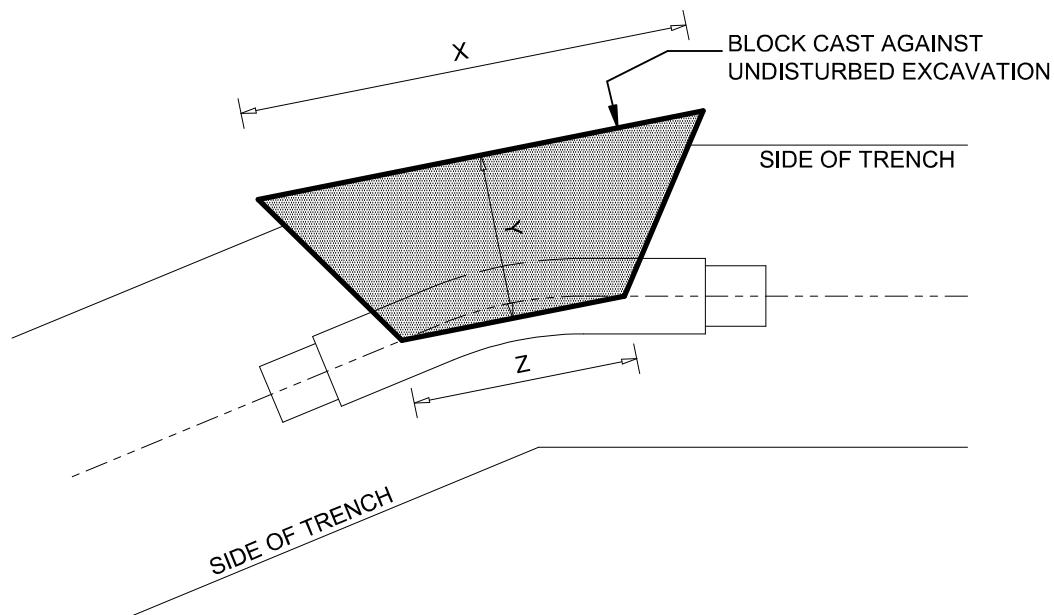
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Drawing No.

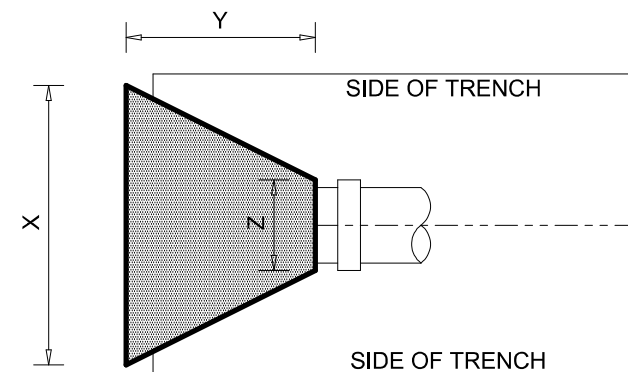
SW7



FOR $11\frac{1}{4}^\circ$ AND $22\frac{1}{2}^\circ$ BENDS

NOTES:

1. TO CAST CONCRETE AGAINST UNDISTURBED EXCAVATION Y MUST BE INCREASED AS NEEDED.
2. BEARING PRESSURE OF SOIL BEHIND THRUST BLOCK MUST BE AT LEAST 40 kPa AND THE TEST PRESSURE HEAD IN PIPELINE NOT BIGGER THAN 135 kPa.
3. THRUST BLOCKS MUST BE BUILT SYMMETRICAL AROUND FITTINGS.



FOR ENDCAPS

FOR $11\frac{1}{4}^\circ$ BENDS

PIPE DIAMETER	DEPTH OF BLOCK	X	Y	Z
150	300	400	350	150
100	200	300	300	100
75	200	200	300	100
50	200	200	250	75

FOR $22\frac{1}{2}^\circ$ BENDS

PIPE DIAMETER	DEPTH OF BLOCK	X	Y	Z
150	450	550	400	200
100	300	350	300	150
75	250	250	300	100
50	200	200	250	100

FOR ENDCAPS

PIPE DIAMETER	DEPTH OF BLOCK	X	Y	Z
150	600	1000	450	200
100	500	500	300	150
75	400	400	300	125
50	100	100	250	100



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STANDARD DETAIL DRAWING

THRUST BLOCK FOR ENDCAPS,
 $11\frac{1}{4}^\circ$ AND $22\frac{1}{2}^\circ$ BENDS

Scale

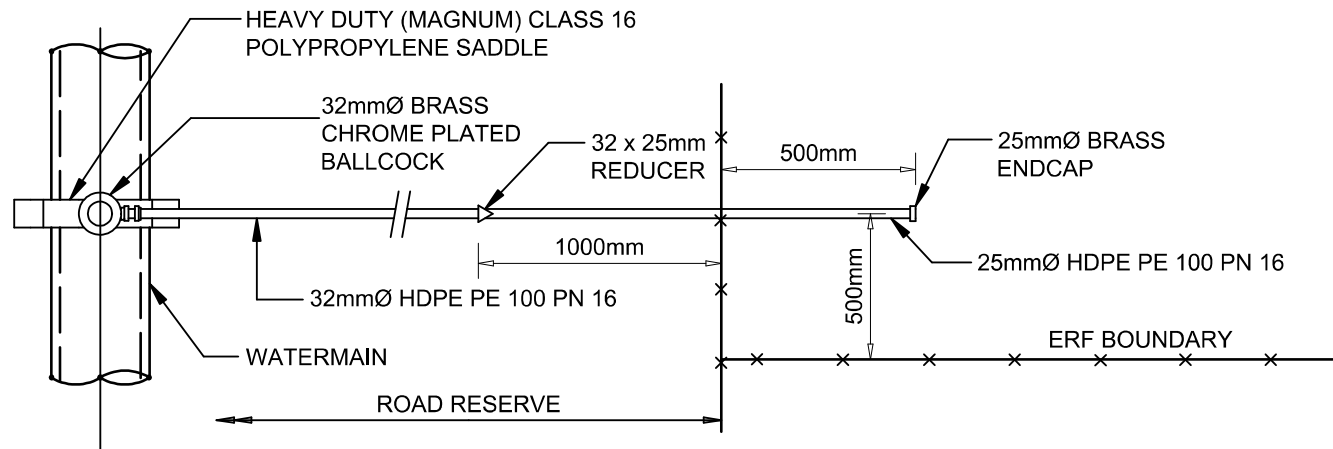
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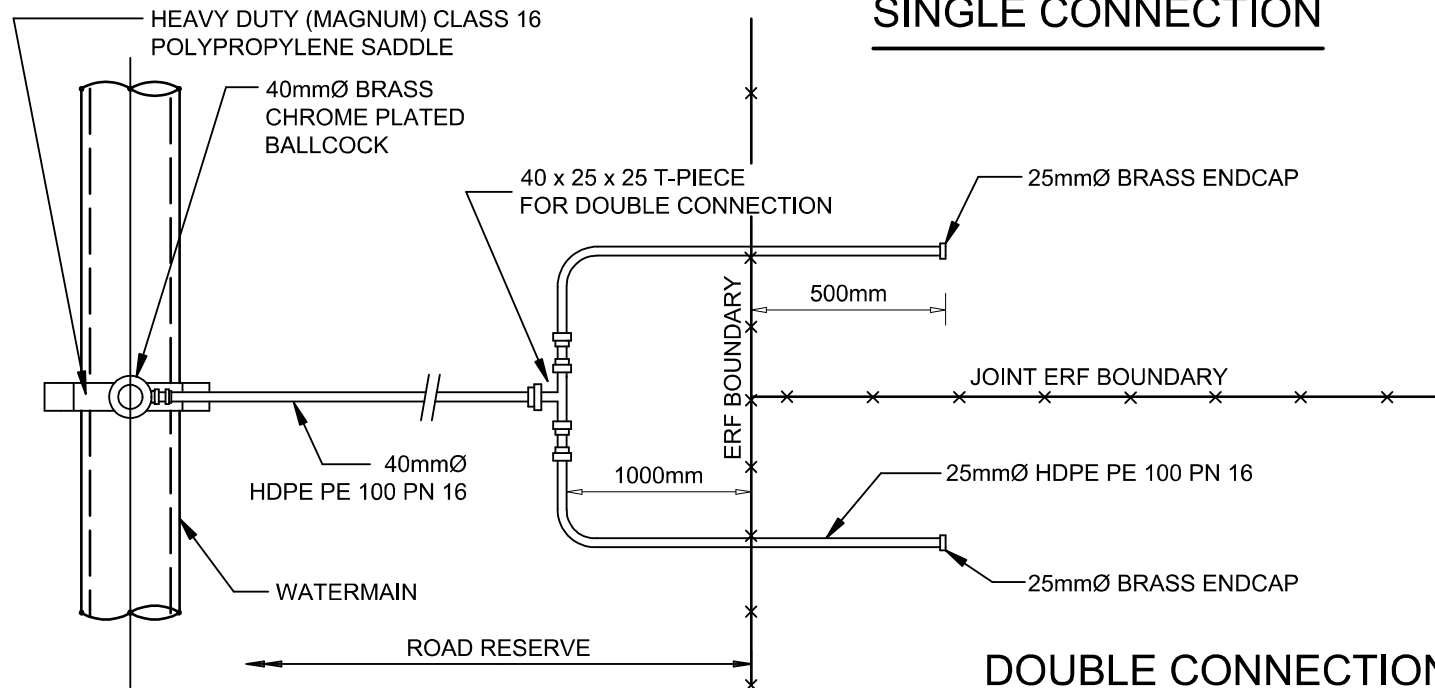
A4

Drawing No.

SW8



SINGLE CONNECTION



DOUBLE CONNECTION

NOTES

1. ALL PIPE SIZES ARE NOMINAL DIAMETER (DN)
2. BALL VALVES TO BE OPEN AT ALL TIMES.
3. ERF CONNECTIONS MAY ONLY BE COVERED AFTER INSPECTION BY MUNICIPAL REPRESENTATIVES.
4. WATER METERS TO BE INSTALLED IN THE ROAD RESERVE - AS CLOSE AS PRACTICALLY POSSIBLE TO THE ERF BOUNDARY.
5. READ IN CONJUNCTION WITH SECTION B OF DESIGN GUIDELINES AND MINIMUM STANDARDS FOR CIVIL ENGINEERING SERVICES.

NOMINAL DIA (DN) VS
INSIDE DIA (ID)

SANS 150 4427 : 1996
PE 100 PN 16

DN (mm)	ID (mm)
20	15.10
25	20.10
32	25.60
40	32.20
50	40.20



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STANDARD DETAIL DRAWING

TYPICAL ERF CONNECTION : PLAN

Scale

N.T.S.

Paper Size

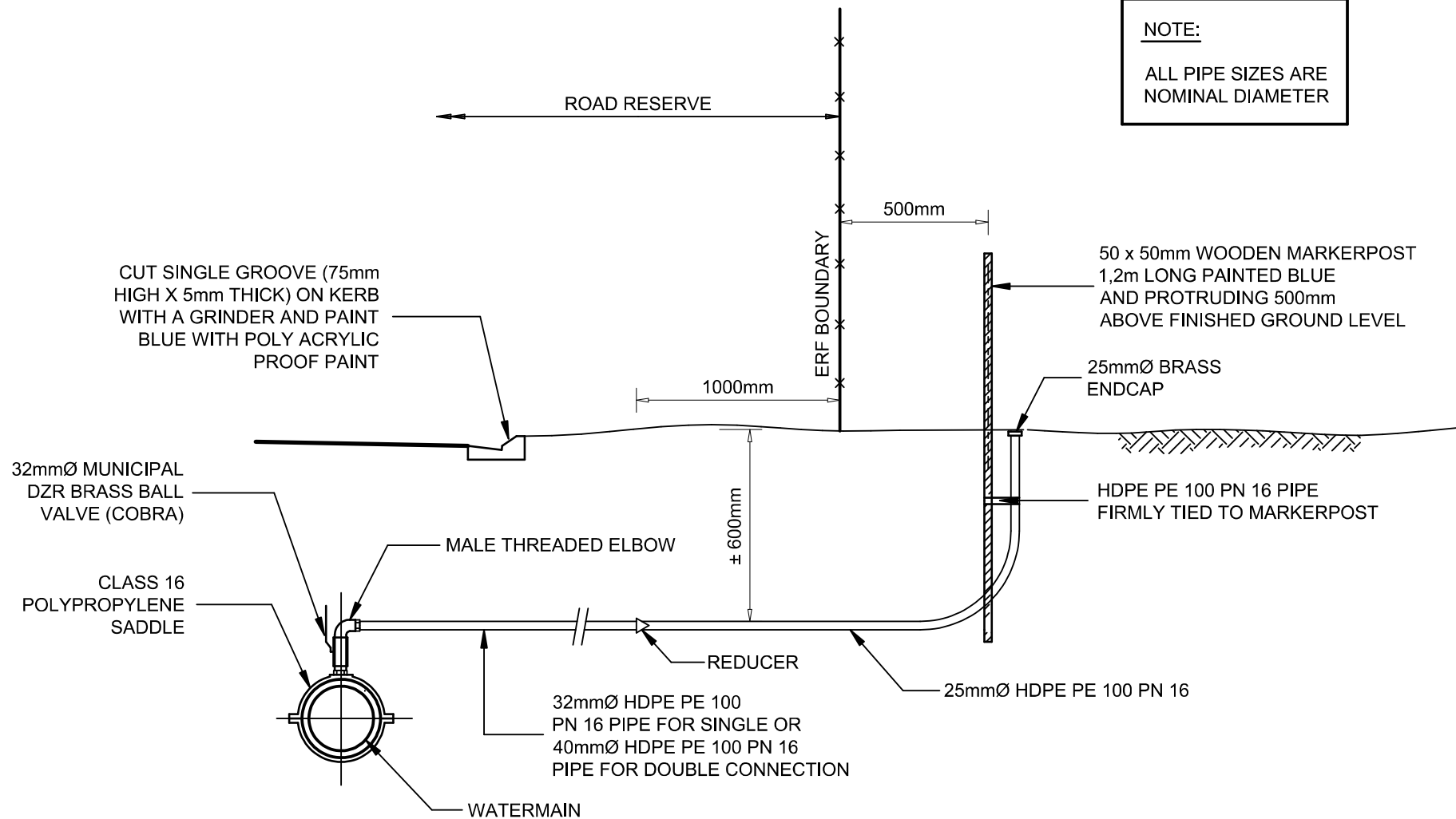
A4

Drawing No.

SW9

NOTE:

ALL PIPE SIZES ARE
NOMINAL DIAMETER



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STANDARD DETAIL DRAWING

TYPICAL ERF CONNECTION : SECTION

Scale

N.T.S.

Paper Size

A4

Drawing No.

SW10

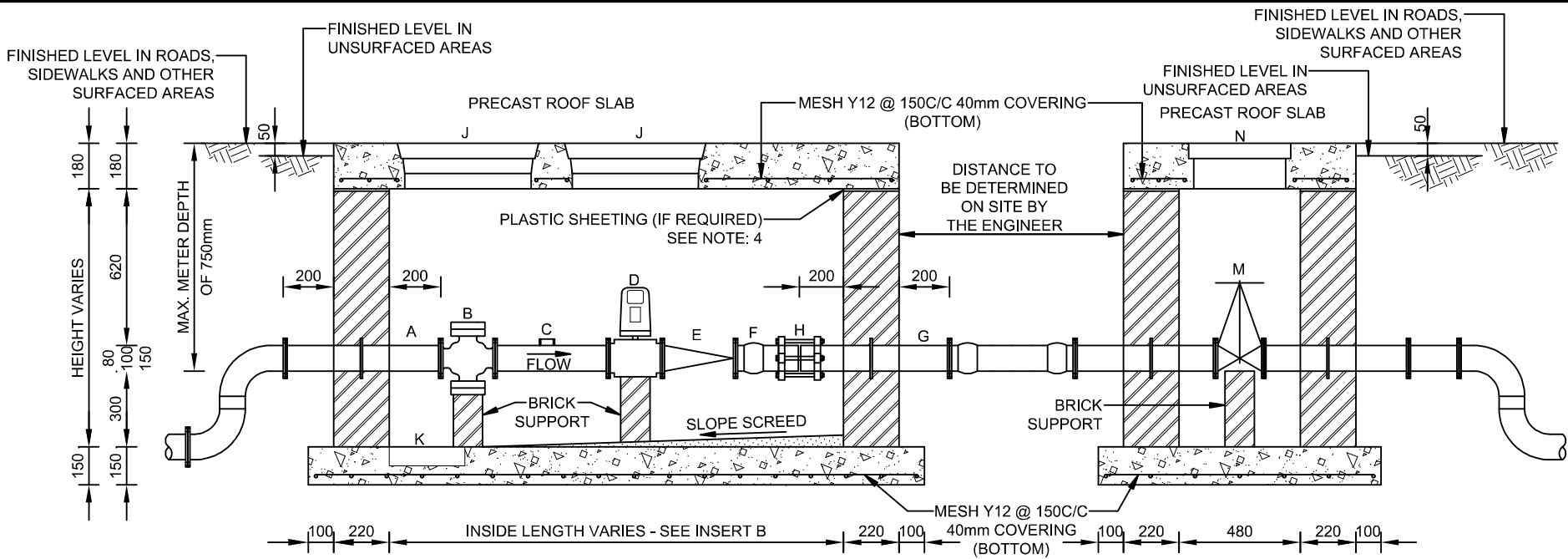
PARTS LIST

- ITEM A: PUDDLE PIECE, FLANGED\ T16
ITEM B: STRAINER, FLANGED\ T16 [SENSUS]
ITEM C: SPOOL PIECE, FLANGED\ T16 [BOTH SIDES] WITH PRESSURE NIPPLE & 25mmØ BALL VALVE
ITEM D: COMBINATION WATER METER, FLANGED\ T16 [SENSUS] [SENSUS, MEITWIN = 80 & 100 mm] [SENSUS, WPVD = 150 mm]
ITEM E: (AVK SWING CHECK VALVE)*, FLANGED\ PN16\ T16
ITEM F: FLANGED ADAPTOR, T16
ITEM G: PUDDLE PIECE, PLAIN & FLANGED ENDED\ T16
ITEM H: VIKING JOHNSON COUPLING
ITEM J: 600 DIA, LIGHT DUTY, DUCTILE IRON COVER & FRAME [HINGE WITH SNAP LOCK]
ITEM K: SUMP
ITEM L: MUNICIPAL VALVE TO BE (AVK TYPE 1)* LEFT HAND CLOSE WITH CAP TOP
ITEM M: CONSUMER VALVE TO BE (AVK TYPE 1)* RIGHT HAND CLOSE WITH HAND WHEEL
ITEM N: HINGED DUCTILE IRON : SAINT GOBAIN. SECUREX Z - 600 D (SANS 50124 CLASS D400) OR SIMILAR APPROVED.

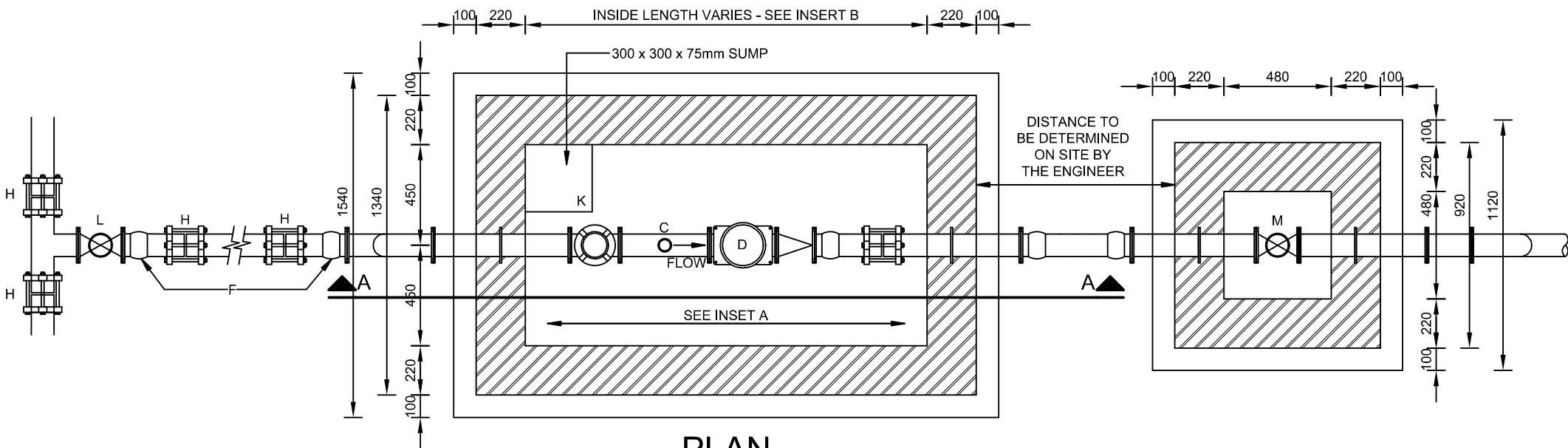
* AVK OR SIMILAR APPROVED BY PROJECT ENGINEER

NOTES

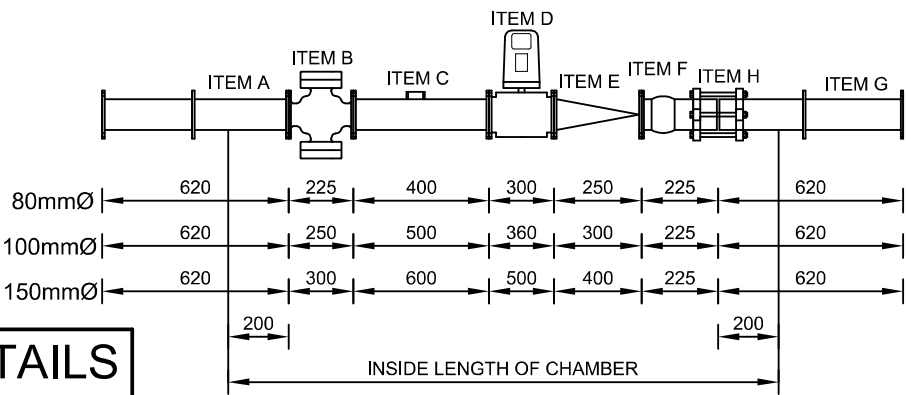
- NOTE 1: PLASTIC SHEETING 375 MICRON EMBOSSED D.P.C. SABS 952/1962 TYPE B TO BE PLACED ON WALLS BEFORE PLACING ROOF SLAB IN PLACE AND SEAL INTERNAL AND EXTERNAL JOINTS WITH SIKAFLEX-PRO 2HP
NOTE 2: CONCRETE GRADE 25/19 FOR FLOOR AND ROOF SLABS
NOTE 3: AVOID PLACING THE METER CHAMBER IN THE ROAD AND ENTRANCES WHEREVER POSSIBLE
NOTE 4: CHAMBER WALLS TO BE PLASTERED, EXTERNAL AND INTERNAL, TO PREVENT SEEPAGE OF GROUND WATER INTO MANHOLE (PLASTER 13mm THICK, STEEL TROWELLED TO SMOOTH SURFACE
NOTE 5: EXTERNAL PLASTERED WALLS TO BE COATED WITH 2 COATS FLINTKOTE [ABE] AND 1 FINAL COAT SILVAKOTE [ABE] AND 1 FINAL COAT SILVAKOTE [ABE] AND INTERNAL PLASTERED WALLS TO BE COATED WITH 3 COATS DURASLURRY [ABE]
NOTE 6: ALL FLANGES TO BE DRILLED T16
NOTE 7: VIKING JOHNSON COUPLING TO BE SEALED WITH DENSO TAPE
NOTE 8: ONLY STAINLESS STEEL 316L SHOULD BE USED FOR BOLTS & NUTS
NOTE 9: INTERNAL, PIPE PIECES SHALL BE COATED WITH 3 COATS CARBOLINE 891, MINIMUM TOTAL THICKNESS OF 250 MICRON
NOTE 10: EXTERNAL, PIPE PIECES SHALL BE COATED WITH 3 COATS CARBOLINE 891, MINIMUM TOTAL THICKNESS OF 250 MICRON
NOTE 11: EXTERNAL, VIKING JOHNSON/ FLANGE ADAPTORE TO BE SEALED WITH DENSO TAPE
NOTE 12: EXTERNAL BENDS, TEES & FLANGE ADAPTORES SHALL BE COATED WITH 3 COATS CARBOLINE 891, MINIMUM TOTAL THICKNESS OF 250 MICRON



SECTION A - A



PLAN



INSET A

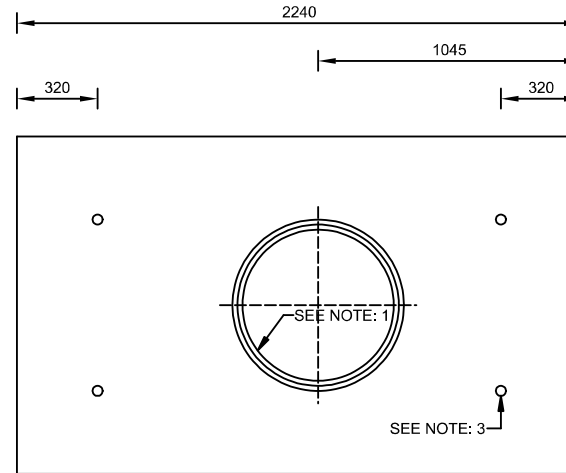
CHAMBER DIMENSIONS		FLOOR SLAB	WATER METER
INSIDE DIMS	OUTSIDE DIMS	OUTSIDE DIMS	METER SIZE
1800x900	2240x1340	2440x1540	80mm
2035x900	2475x1340	2675x1540	100mm
2425x900	2865x1340	3065x1540	150mm

INSET B

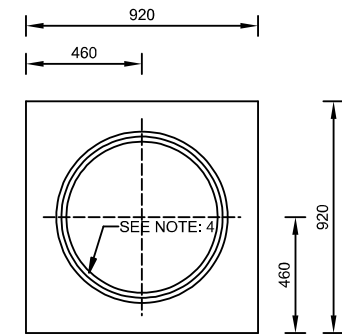
FOR COVER SLAB DETAILS
SEE DRAWING SW12

NOTES

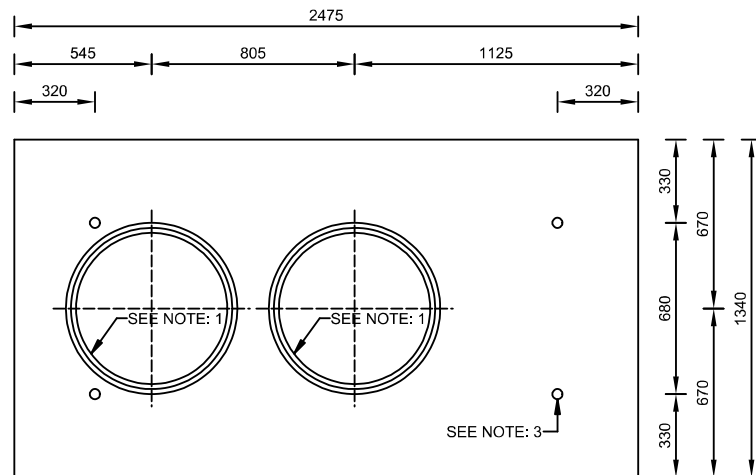
- NOTE 1: DUCTILE IRON COVER FRAMES TO BE PLACED ABOVE WATER METER & STRAINER
- NOTE 2: CUT & BEND MESH TO SUIT COVER OPENING & SUMP
- NOTE 3: PROVIDE 4 NO. 40mmØ LIFTING HOLE IN ROOF SLAB [PLUGGED WITH BITUMEN AFTER ROOF SLAB IS IN PLACE TO PREVENT WATER SEEPAGE]
- NOTE 4: HINGED DUCTILE IRON : SAINT GOBAIN SECUREX Z - 600 D (SANS 50124 CLASS D400) OR SIMILAR APPROVED



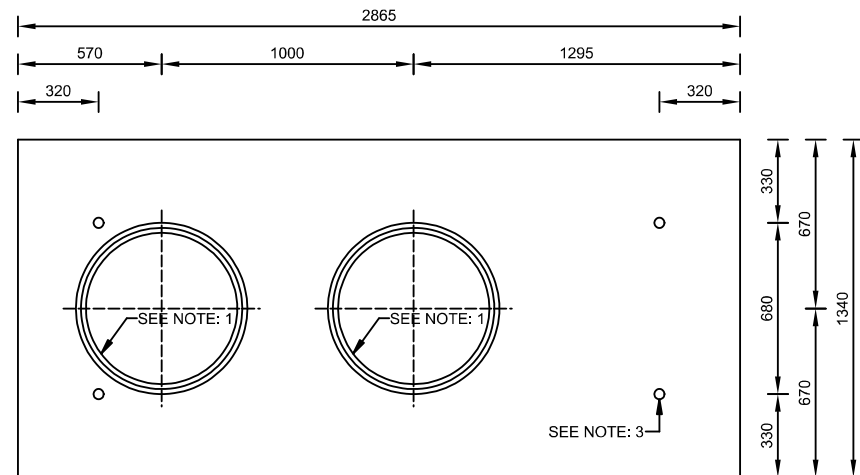
FOR 80mmØ METER



FOR CONSUMER
VALVE CHAMBER



FOR 100mmØ METER



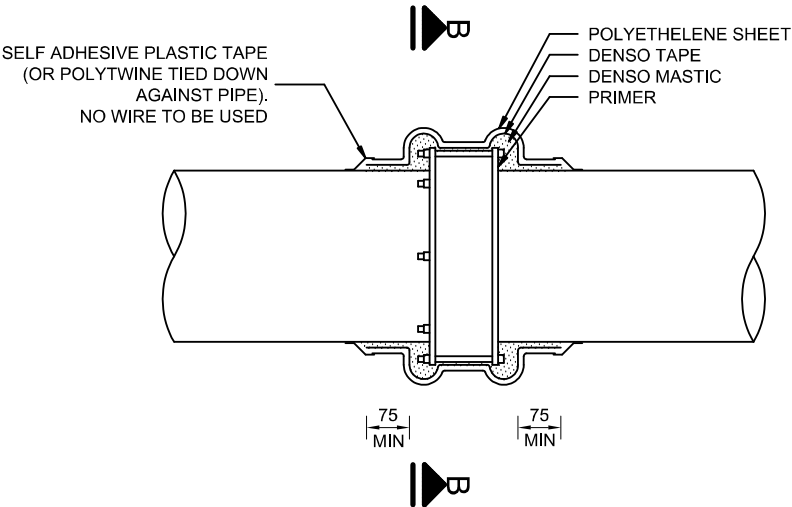
FOR 150mmØ METER

**SUPERCEDED - PLEASE OBTAIN LATEST SPECIFICATION
FROM MUNICIPALITY**

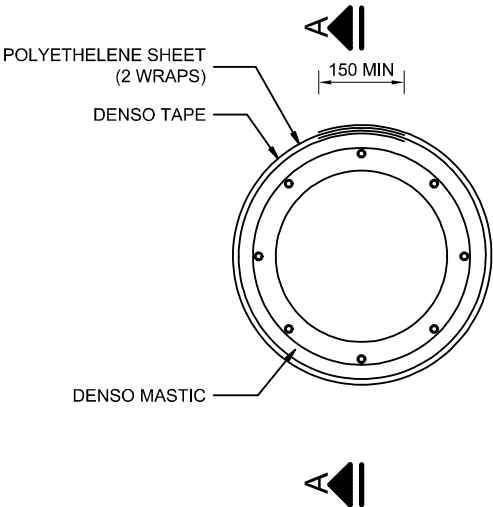
STANDARD DETAIL DRAWING

NOTES:

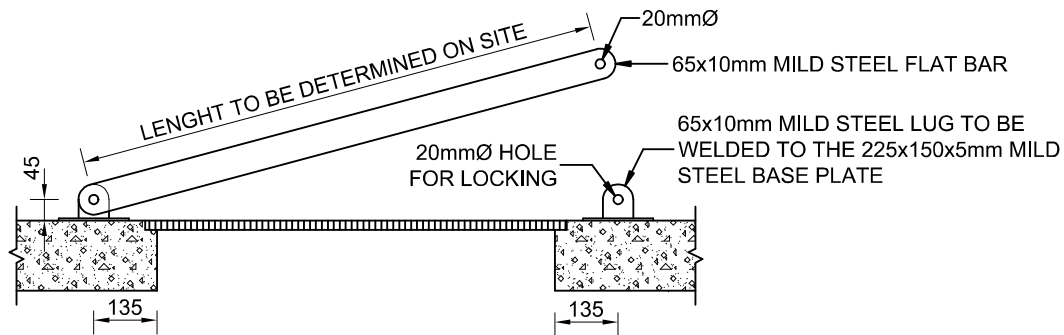
- 1. ALL WORK MUST BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATION SABS 1200 AND THE GENERAL CINDITIONS OF CONTRACT FOR THE CONSTRUCTION OF CIVIL ENGINEERING WORKS (2004).
- 2. ALL MODIFICATIONS TO EXISTING SERVICES AND DEVIATIONS FROM THE DESIGN TO BE AS PER INSTRUCTION FROM THE ENGINEER ONLY.
- 3. ALL CONCRETE TO BE CLASS 20/19 UNLESS OTHERWISE SPECIFIED.
- 4. ALL MATERIAL TO BE SUBMITTED TO ENGINEER FOR APPROVAL BY STELLENBOSCH MUNICIPALITY PRIOR TO CONSTRUCTION.
- 5. DENSO OR APPROVED EQUIVALENT PRODUCTS TO BE USED.
- 6. DENSO PRIMING SOLUTION TO BE BRUSHED ON TO ALL EXTERNAL PARTS OF COUPLING. BOLTS AND AT LEAST 75mm OF PIPE EITHER SIDE OF COUPLING.
- 7. DENSO TAPE TO BE MOULDED FIRMLY INTO PLACE AND SMOOTHED OVER BY HAND.



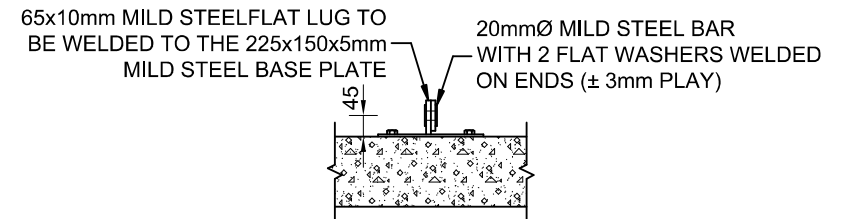
SECTION A - A



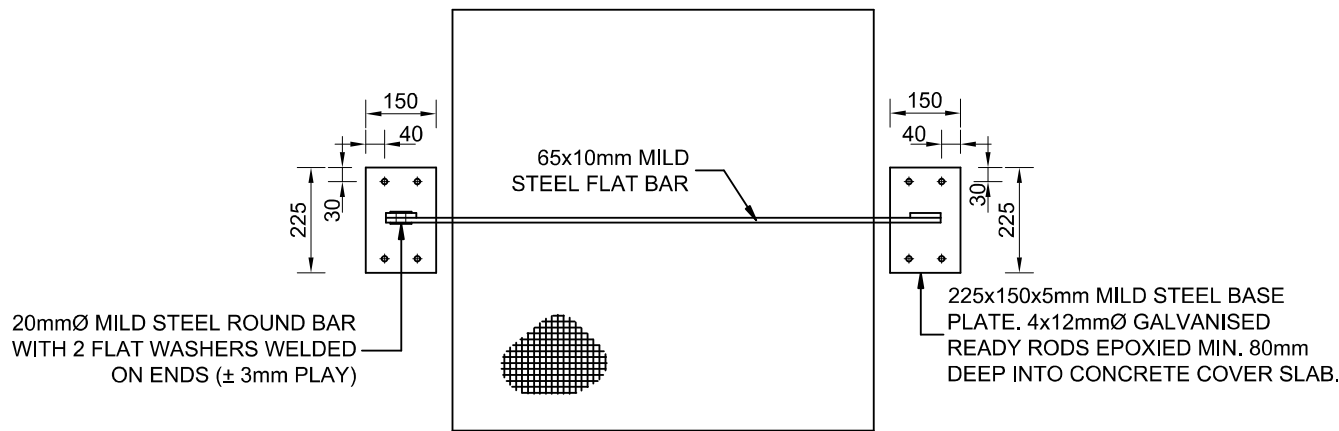
SECTION B - B



FRONT VIEW



SIDE VIEW



PLAN VIEW

NOTES:

1. ALL STEEL ITEMS SHALL BE, HOT DIP GALVANIZED (HDG) TO SABS EN 10240 AND SABS ISO 1461. WHERE THE HDG IS DAMAGED IT SHALL BE REPAIRED WITH ZINCFIX (OR SIMILAR APPROVED) TO MANUFACTURER'S SPECIFICATIONS.
2. ALL WELDS SHALL BE 6mm FILLET WELDS TO SABS 044.



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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

LOCKING BAR DETAIL

Scale

N.T.S.

Paper Size

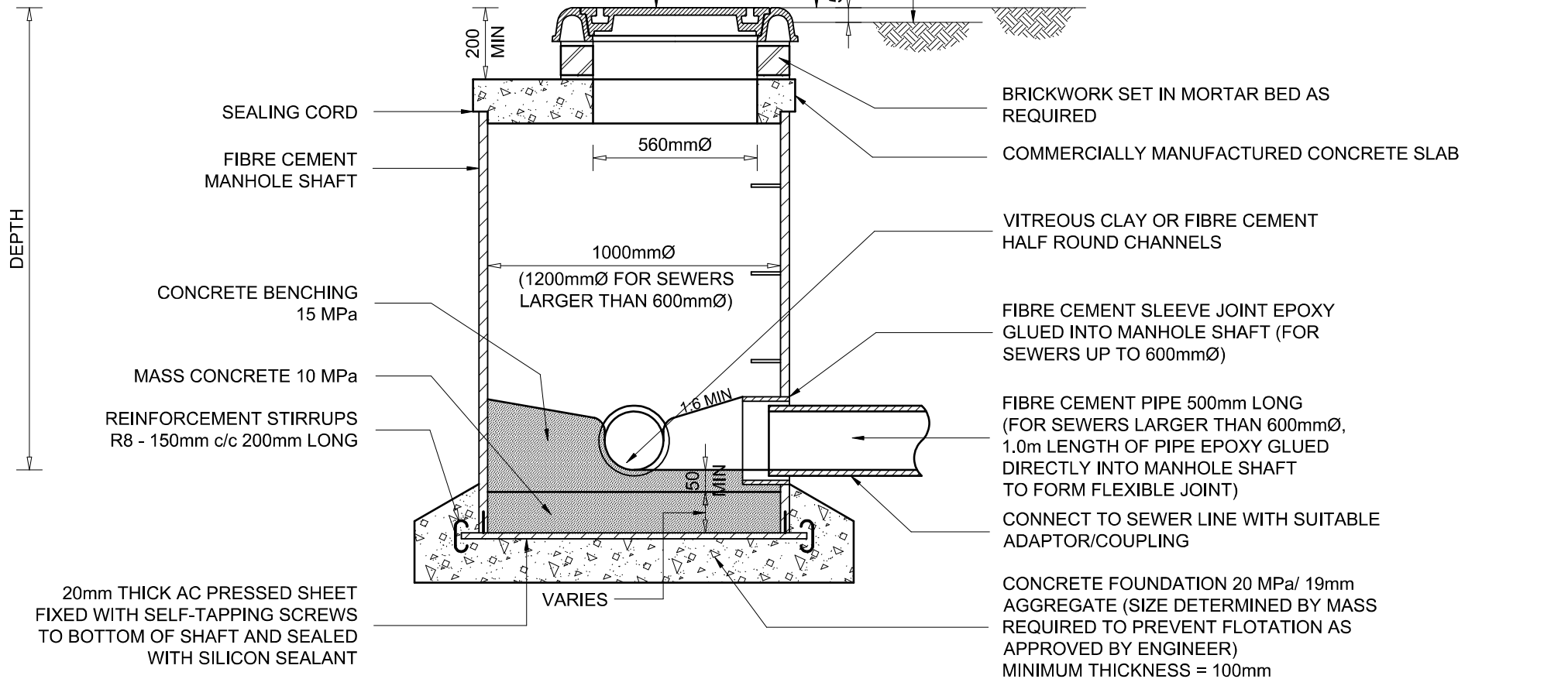
A4

Drawing No.

SW14

NOTE:

STEP IRONS AT 300mm c/c
STAGGERED LEFT AND RIGHT



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

SEWER MANHOLE : FIBRE CEMENT

Scale

1 : 20

Paper Size

A4

Drawing No.

SS1

NOTE:

THE PREFERRED MANHOLE TYPE IS THE PRECAST FIBRE CEMENT TYPE (DRAWING NO. SS1). USE OF THE PRECAST CONCRETE MANHOLE IS TO BE APPROVED BY THE WATER SERVICES DEPARTMENT.

COVER AND FRAME: HINGED DUCTILE IRON: SAINT GOBAIN SECUREX Z-600 D (SANS 50124 CLASS D400) OR SIMILAR APPROVED. HINGED - TO BE SECURED AND NON REMOVABLE

FINISHED LEVEL IN ROADS, SIDEWALKS AND OTHER SURFACED AREAS

FINISHED LEVEL IN UNSURFACED AREAS

VARIES TO SUIT
FINISHED LEVELS

150

2100 MAX.

DEPTH

200
MIN

560mmØ

50

110mm BRICKWORK SHAFT SET IN
1:3 CEMENT MORTAR

150mm PRECAST COVER SLAB 25MPa/ 19mm

1000mmØ PRECAST CONCRETE RINGS

BENCHING 15 MPa CONCRETE
WITH STEEL FLOAT FINISH

230mm BRICKWORK WITH SABS APPROVED BRICKS
COMPLETELY PLASTERED INSIDE AND OUTSIDE.

FIBRE CEMENT SLEEVE JOINT
BUILT INTO BRICKWORK

13mm PLASTER
(1 : 3) ON BOTH
SIDES

1:6 MIN

LARGEST PIPE Ø
+ 150mm

150

500mm LENGTH OF SEWER PIPE
TO FORM FLEXIBLE JOINT

VITREOUS CLAY OR FIBRE CEMENT
HALF ROUND CHANNELS

150mm BASE SLAB
25 MPa CONCRETE/
19mm AGGREGATE

INTERLOCKING
JOINT (NTS)

2 LAYER DENSO TAPE.
TAPE WIDTH = 300mm

WATERPROOF INTERLOCKING JOINT
BY SETTING IN 1:2 CEMENT MORTAR

75

230

1000

230

75

NOTE:

1. STEP IRONS AT 300 c/c AND STAGGERED LEFT AND RIGHT
2. AGGREGATE FOR CONCRETE: DOLOMITIC



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

SEWER MANHOLE : PRECAST CONCRETE

Scale

1 : 20

Paper Size

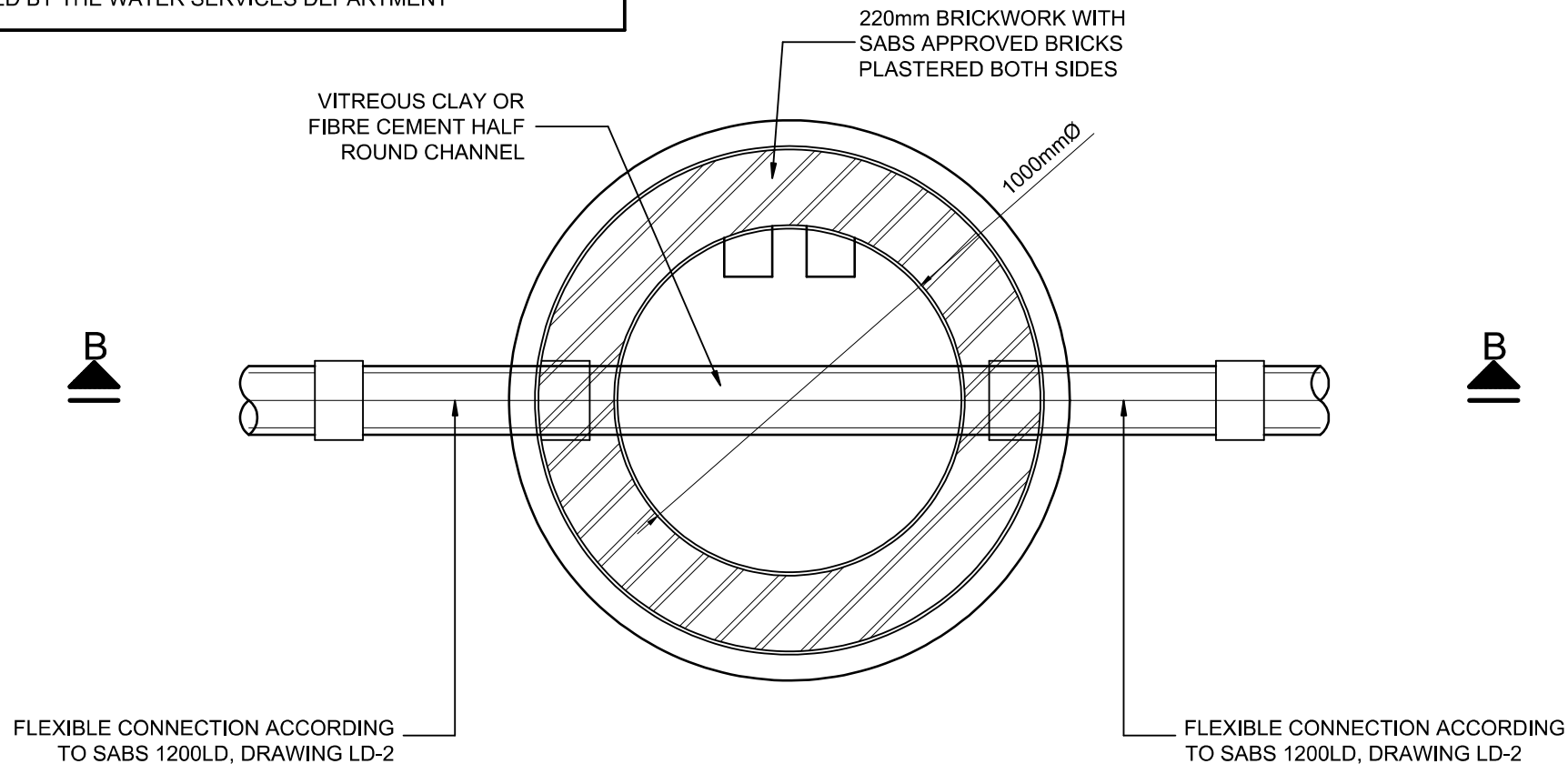
A4

Drawing No.

SS2

NOTE:

THE PREFERRED MANHOLE TYPE IS THE PRECAST FIBRE CEMENT TYPE (DRAWING NO. SS1). USE OF THE BRICK MANHOLE TO BE APPROVED BY THE WATER SERVICES DEPARTMENT



SECTIONAL PLAN A - A



STELLENBOSCH

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STANDARD DETAIL DRAWING

SEWER MANHOLE : BRICK - PLAN (1 OF 3)

Scale

1 : 10

Paper Size

A4

Drawing No.

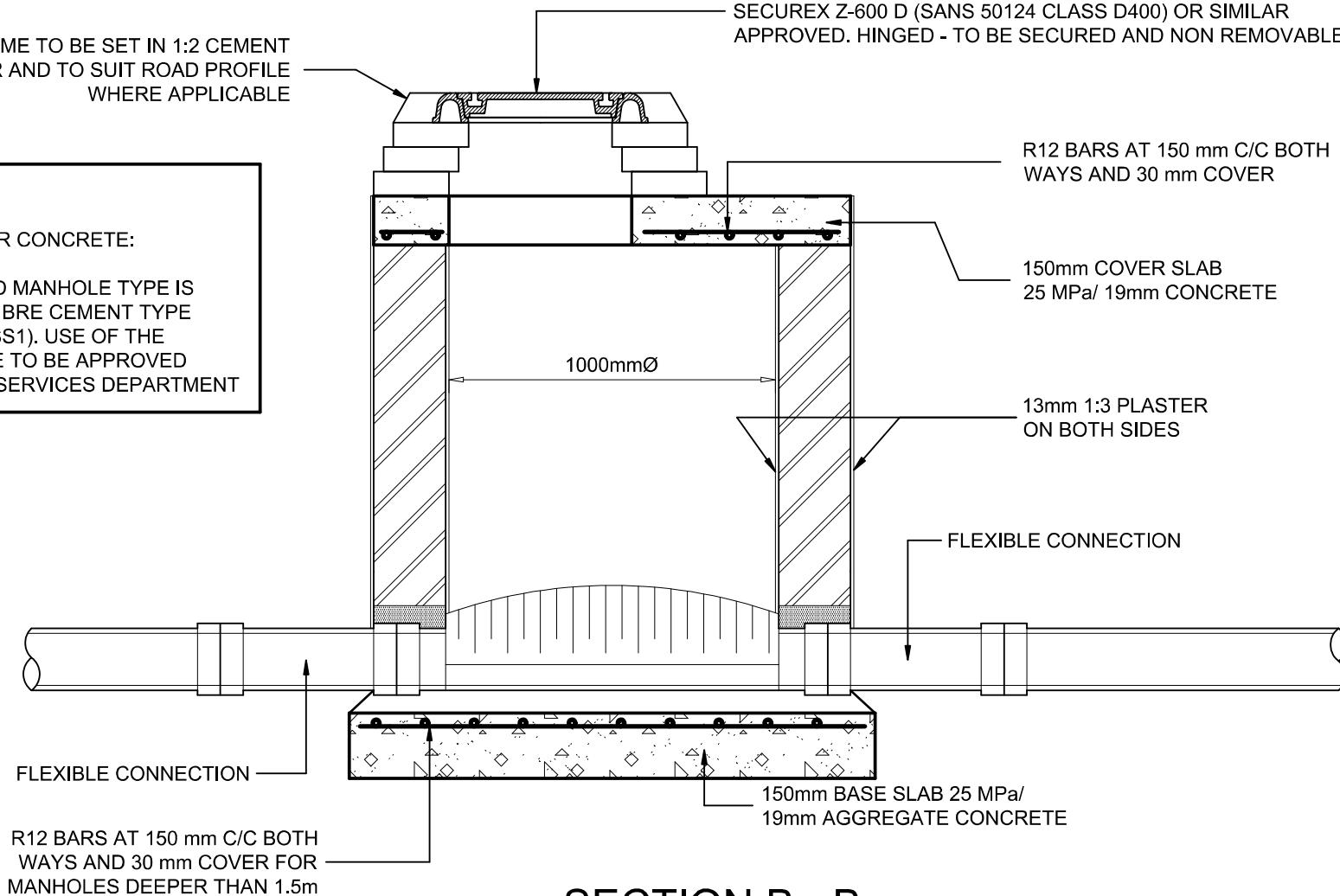
SS3

FRAME TO BE SET IN 1:2 CEMENT MORTAR AND TO SUIT ROAD PROFILE WHERE APPLICABLE

COVER AND FRAME: HINGED DUCTILE IRON: SAINT GOBAIN SECUREX Z-600 D (SANS 50124 CLASS D400) OR SIMILAR APPROVED. HINGED - TO BE SECURED AND NON REMOVABLE

NOTE:

1. AGGREGATE FOR CONCRETE: DOLOMITIC
2. THE PREFERRED MANHOLE TYPE IS THE PRECAST FIBRE CEMENT TYPE (DRAWING NO. SS1). USE OF THE BRICK MANHOLE TO BE APPROVED BY THE WATER SERVICES DEPARTMENT



SECTION B - B



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

SEWER MANHOLE : BRICK - SECTION BB (2 OF 3)

Scale

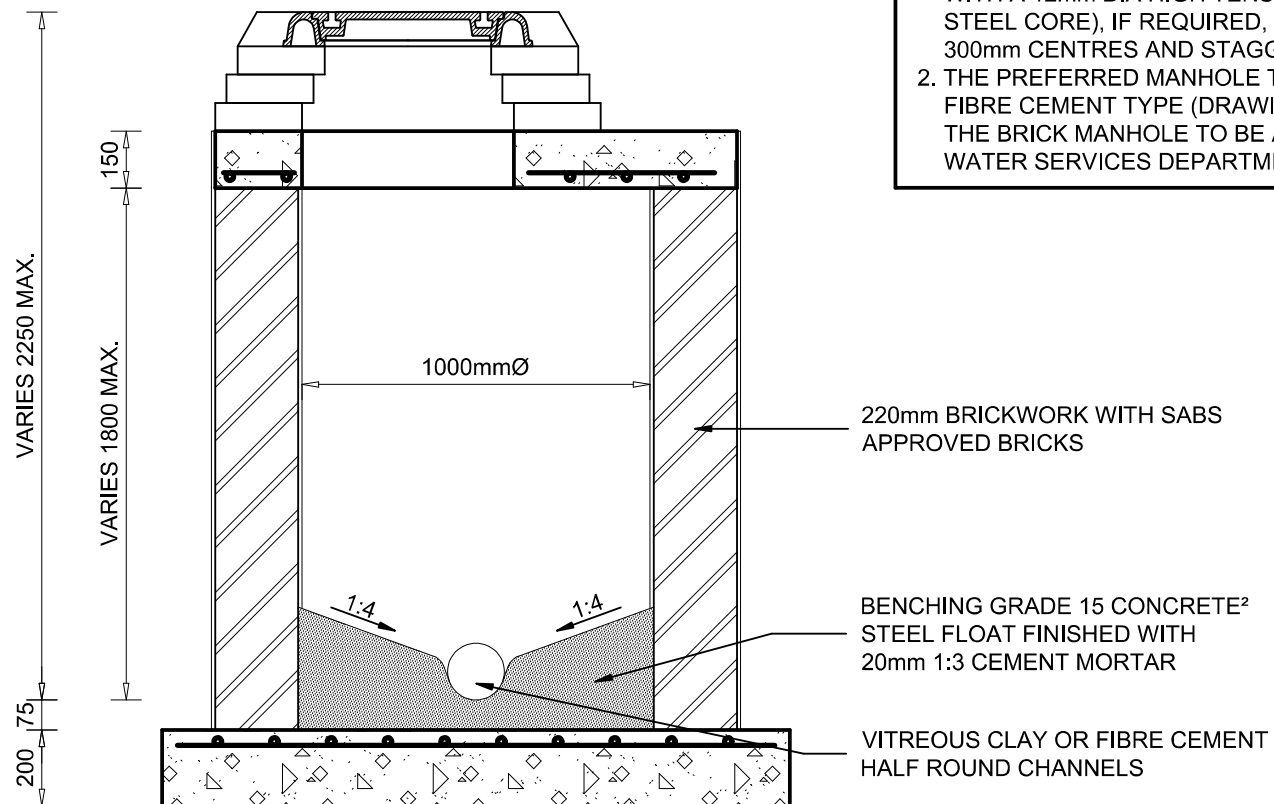
1 : 10

Paper Size

A4

Drawing No.

SS4



SECTION C - C



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

SEWER MANHOLE : BRICK - SECTION CC (3 OF 3)

Scale

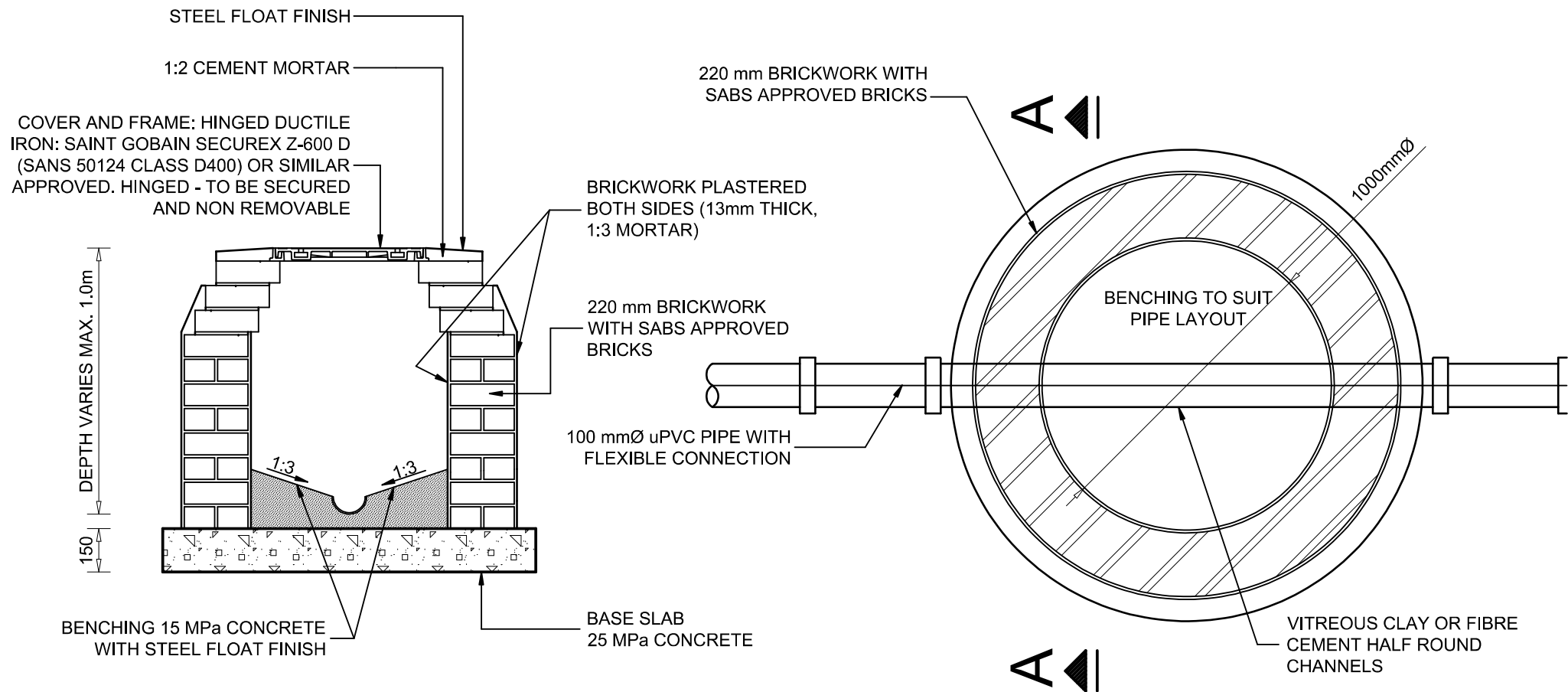
1 : 10

Paper Size

A4

Drawing No.

SS5



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

BRICK MANHOLE FOR SHALLOW SEWERS

Scale

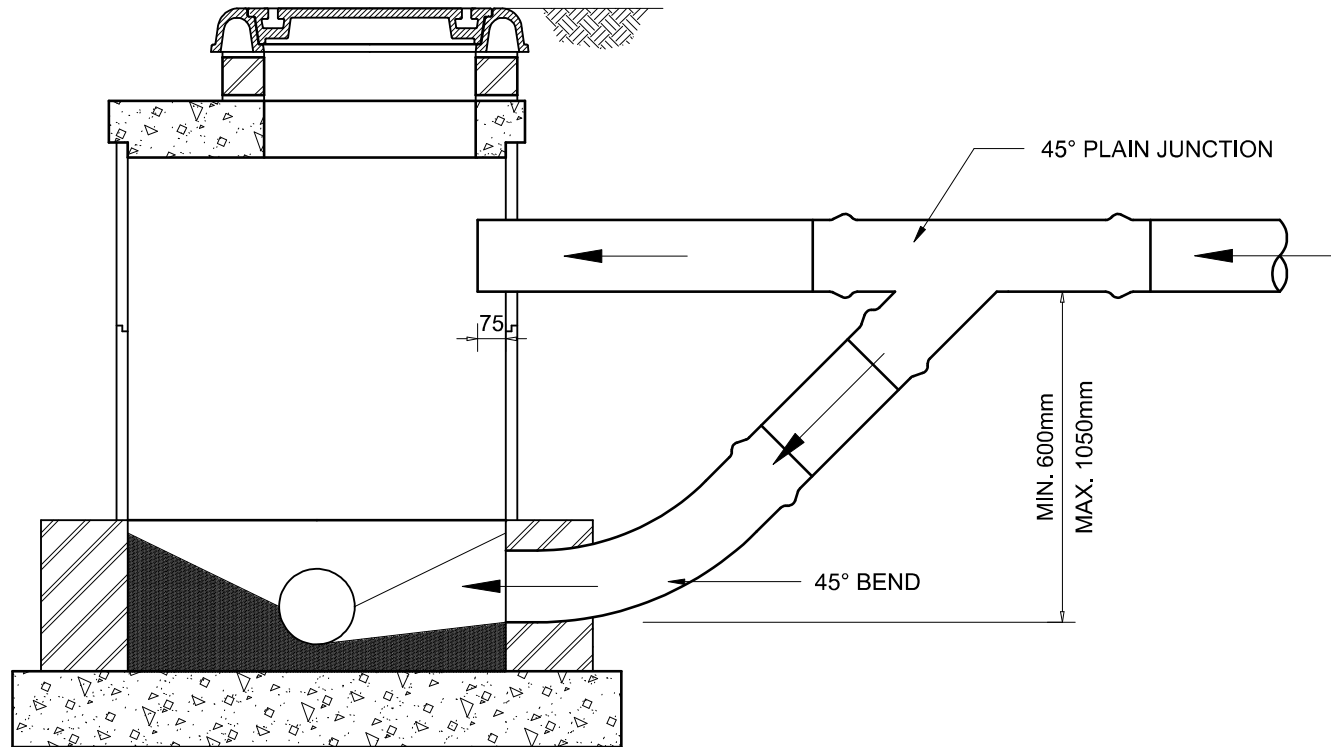
1 : 10

Paper Size

A4

Drawing No.

SS6



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

SEWER MANHOLE WITH BACKDROP : TYPE 1

Scale

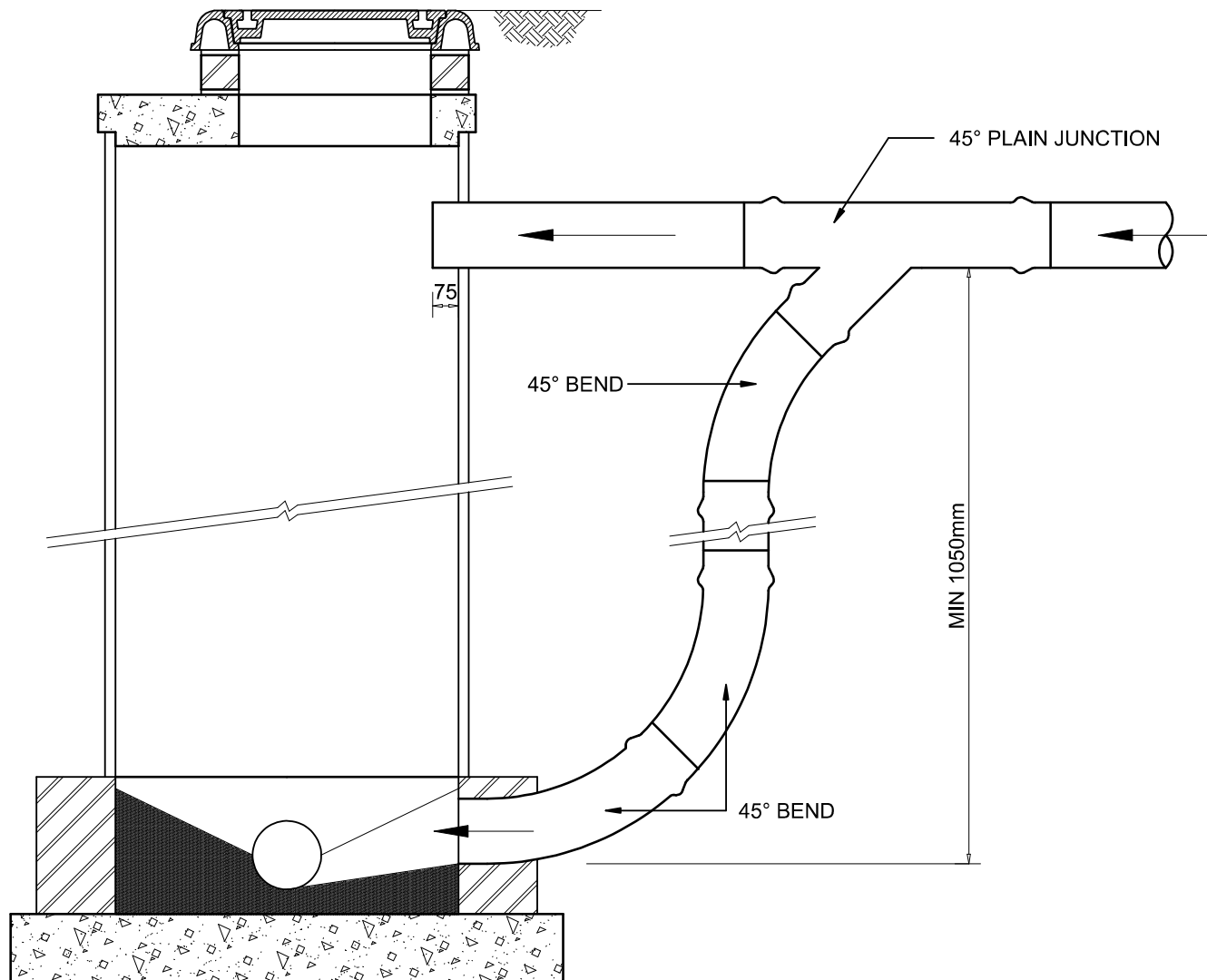
1 : 20

Paper Size

A4

Drawing No.

SS7



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

SEWER MANHOLE WITH BACKDROP : TYPE 2

Scale

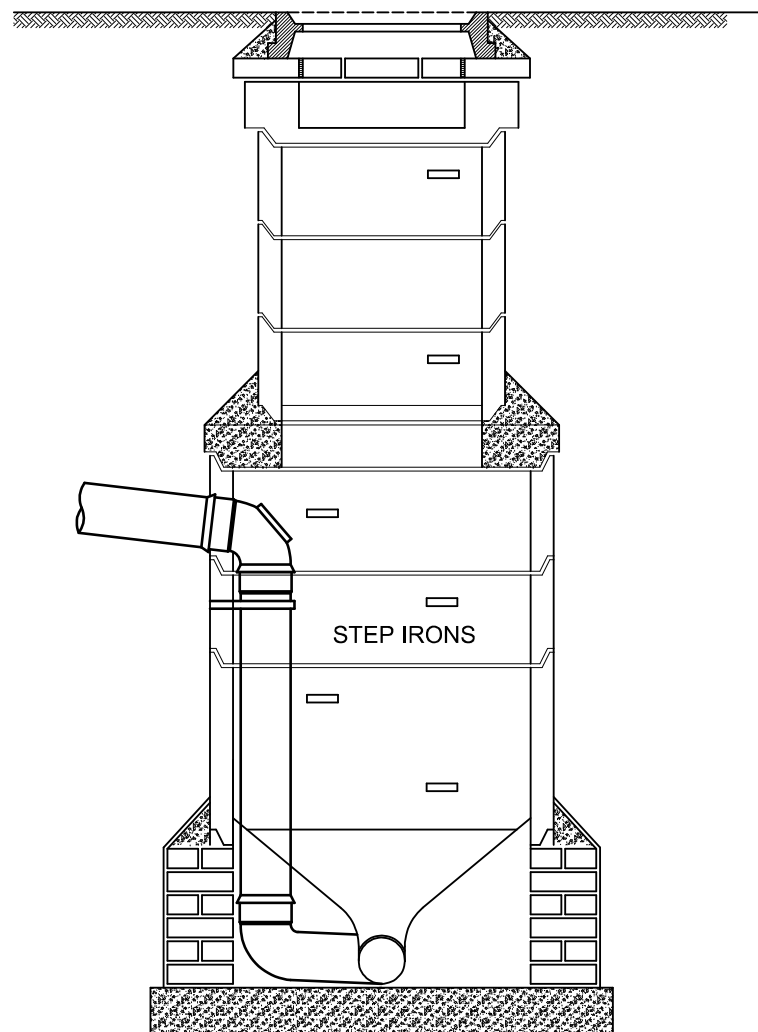
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Paper Size

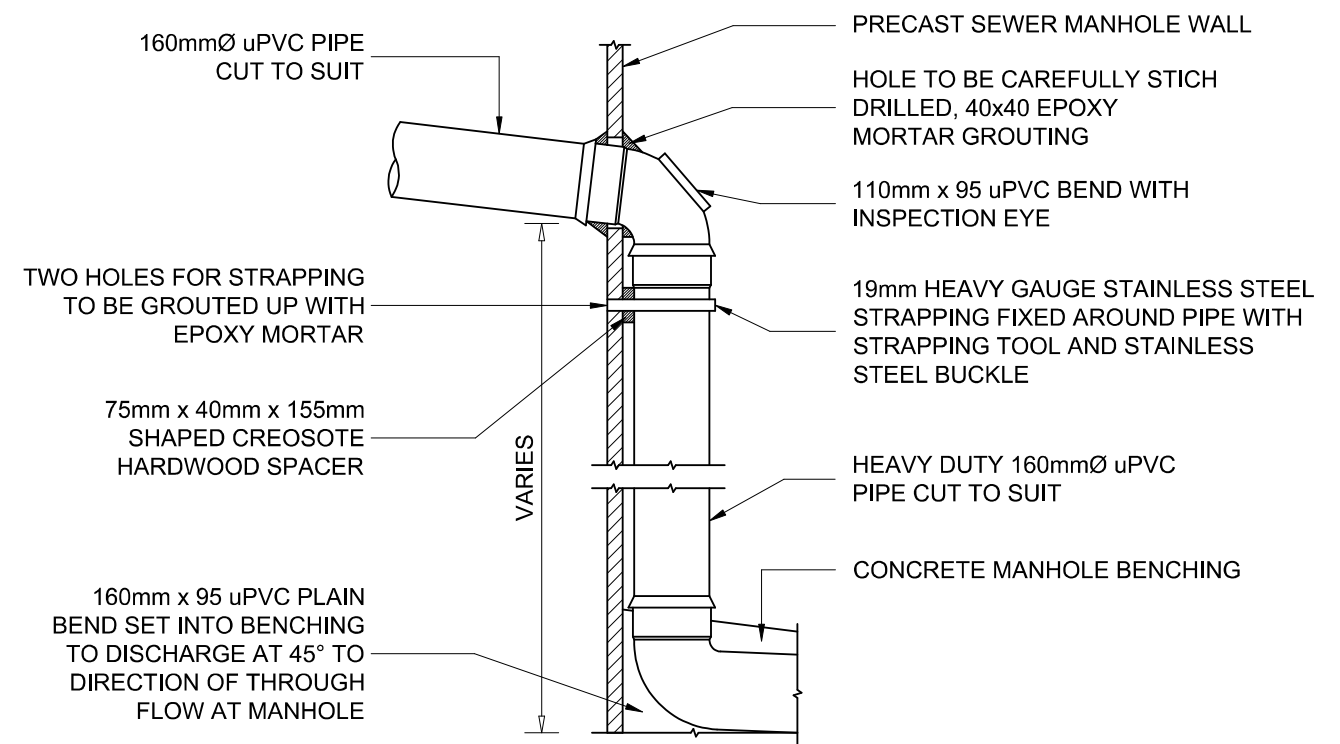
A4

Drawing No.

SS8



**BACKDROP 1.2m DEEP AND MORE
(PRECAST CONCRETE RINGS)**



ELEVATION

PIPE FITTING DETAILS

NOTES:

1. PIPE SOFFIT LEVELS IN MANHOLE TO BE EQUAL EXCEPT WHERE OTHERWISE SHOWN.
2. MATERIAL AROUND BACKDROP PIPEWORK TO BE COMPACTED TO 93% MOD.AASHTO. (100% FOR SAND).
3. ALL BACKDROPS 600mm AND LESS TO BE MADE GOOD BY BENCHING.



STELLENBOSCH
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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

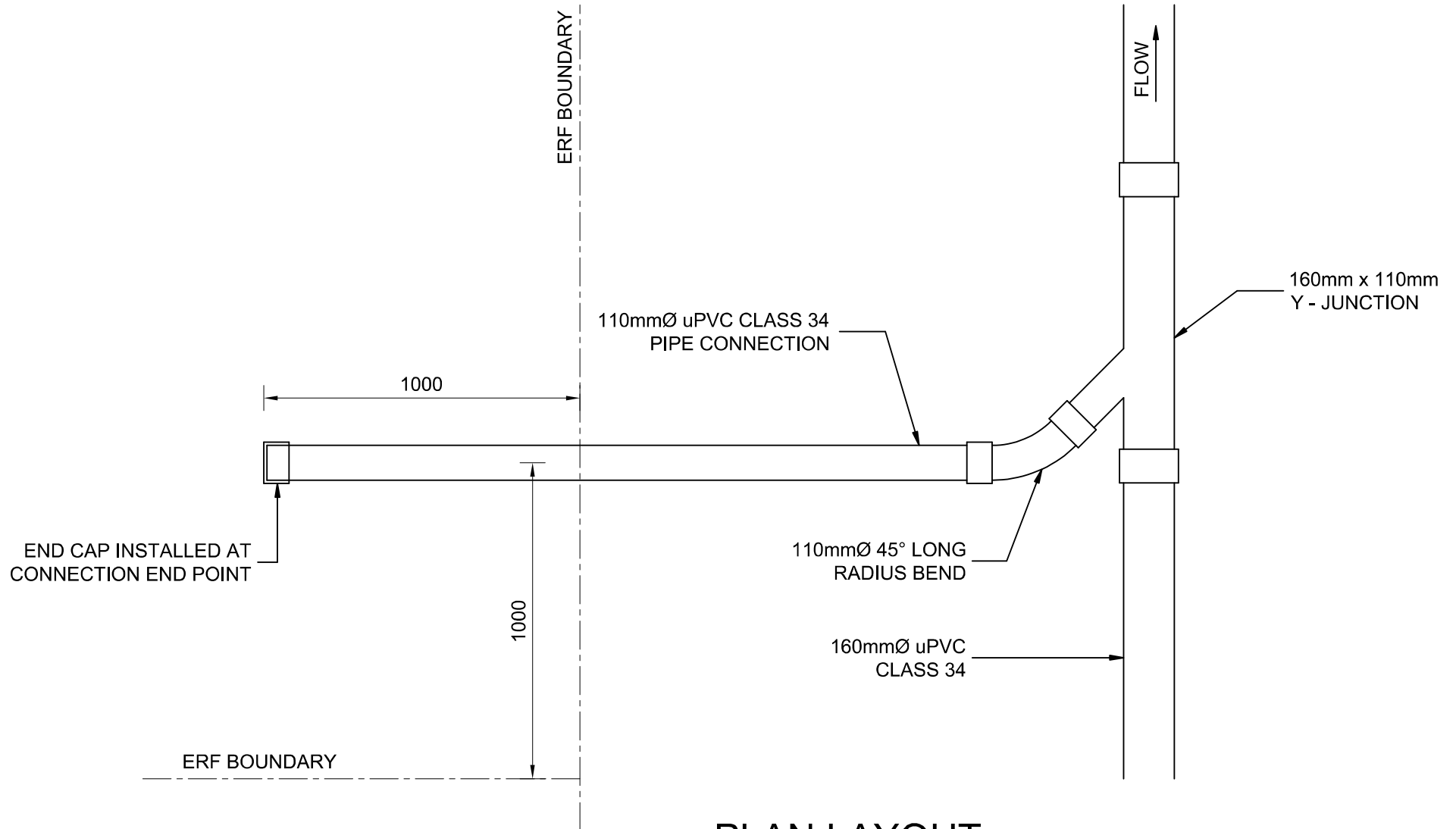
SEWER MANHOLE WITH BACKDROP : TYPE 3 (INTERNAL BACKDROP)

Scale Paper Size

N.T.S. A3

Drawing No.

SS9



PLAN LAYOUT



STELLENBOSCH

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STANDARD DETAIL DRAWING

SEWER ERF CONNECTION LAYOUT

Scale

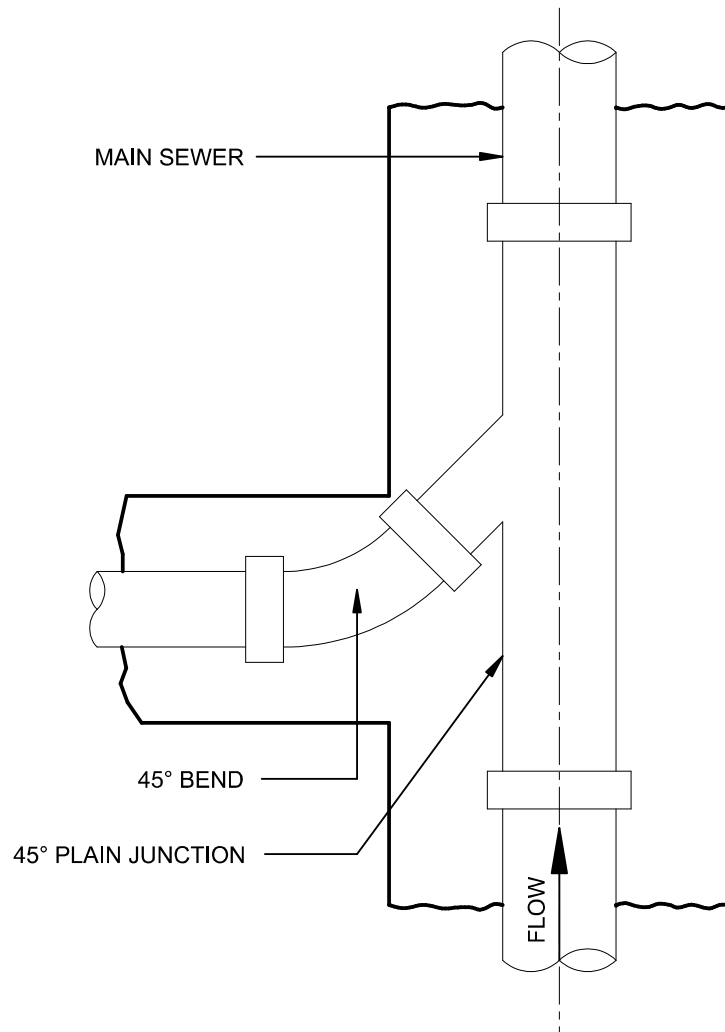
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Paper Size

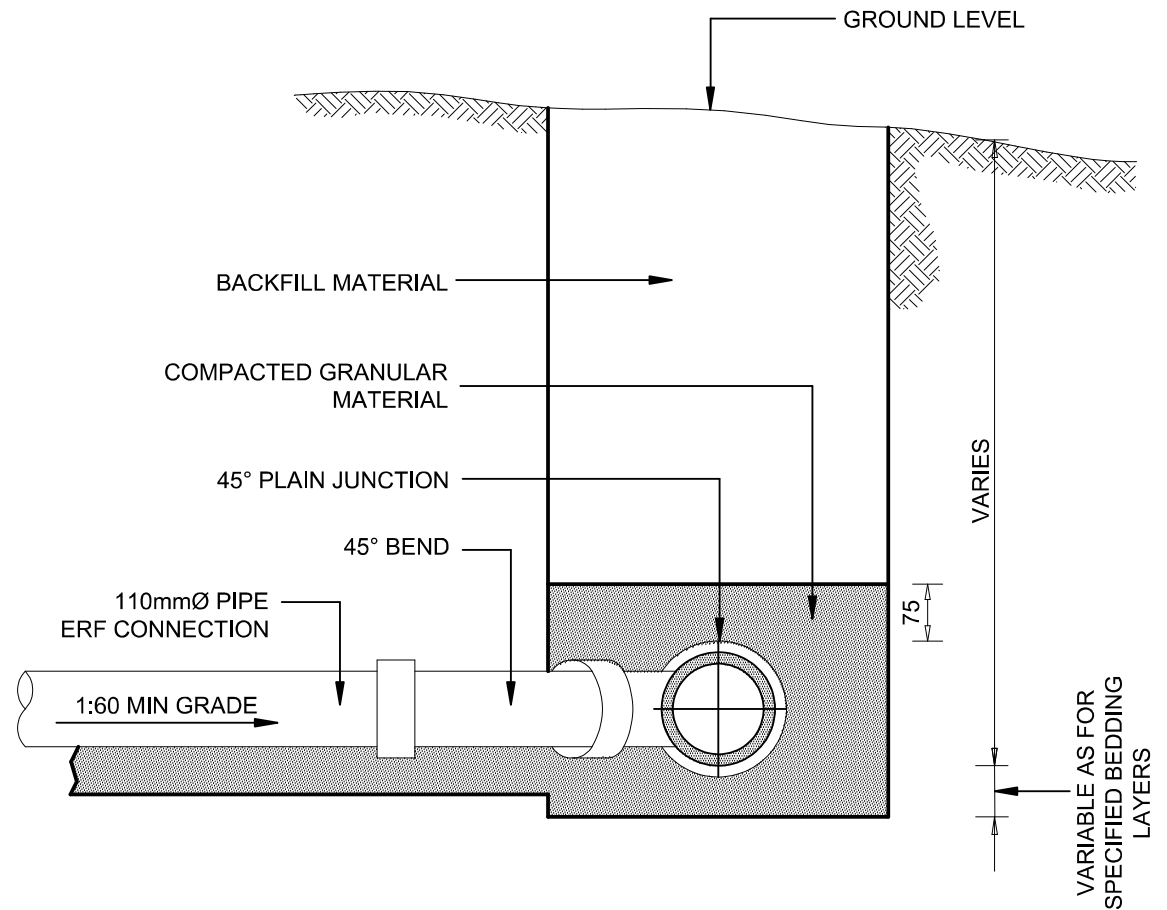
A4

Drawing No.

SS10



PLAN



SECTIONAL ELEVATION



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

SEWER ERF CONNECTION : TYPE 1

Scale

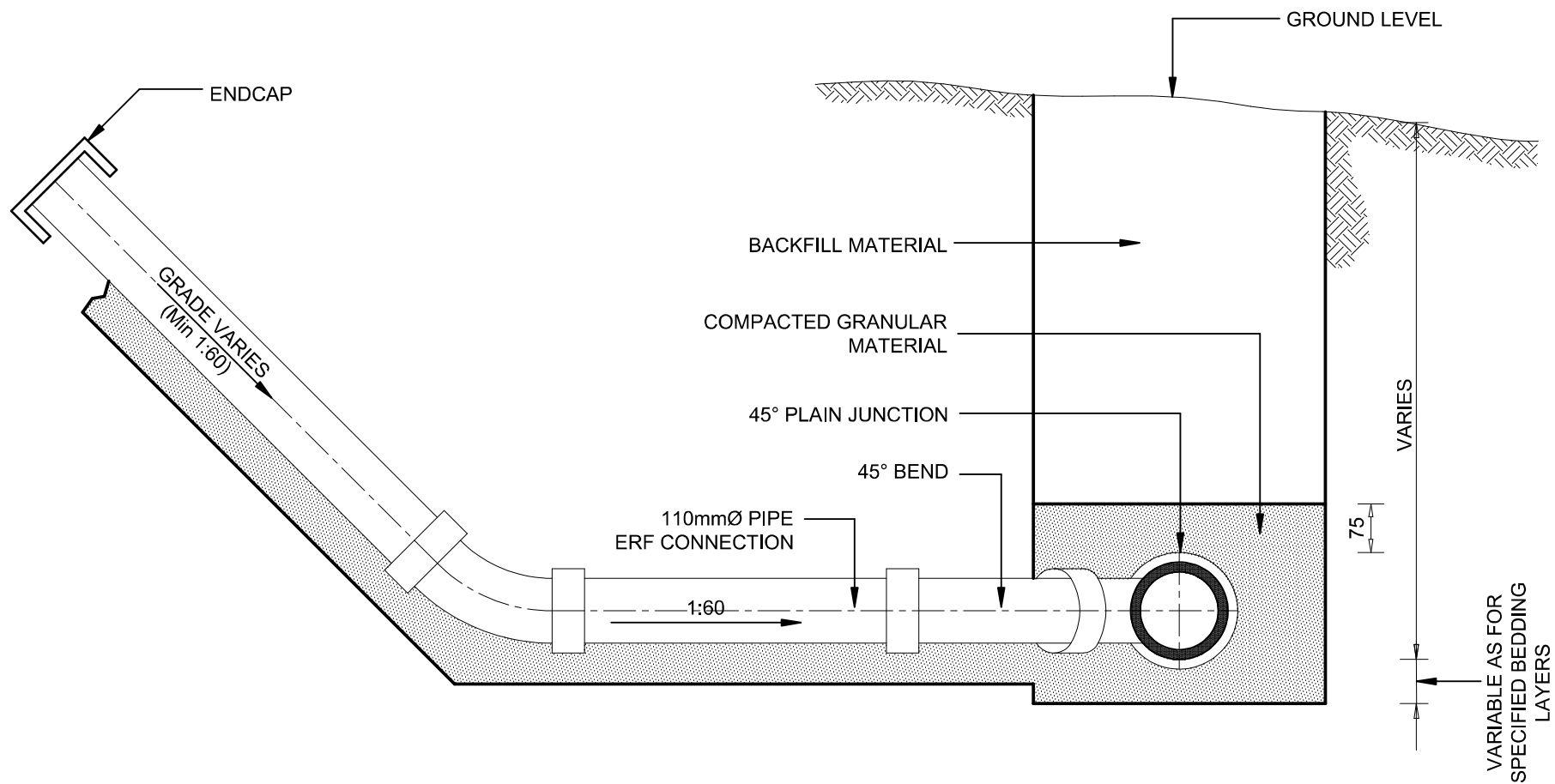
1 : 10

Paper Size

A4

Drawing No.

SS11



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

SEWER ERF CONNECTION : TYPE 2

Scale

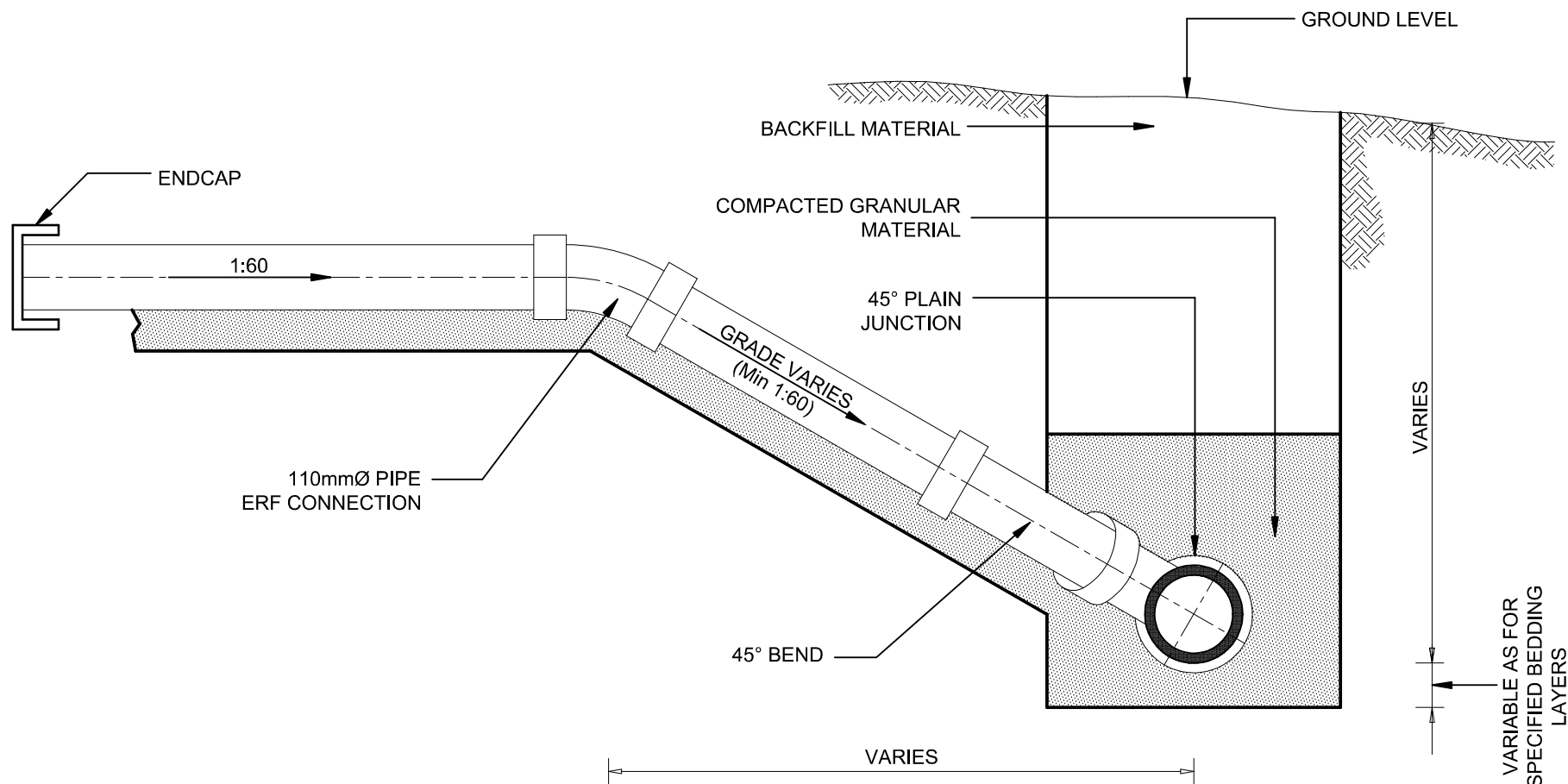
1 : 10

Paper Size

A4

Drawing No.

SS12



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

SEWER ERF CONNECTION : TYPE 3

Scale

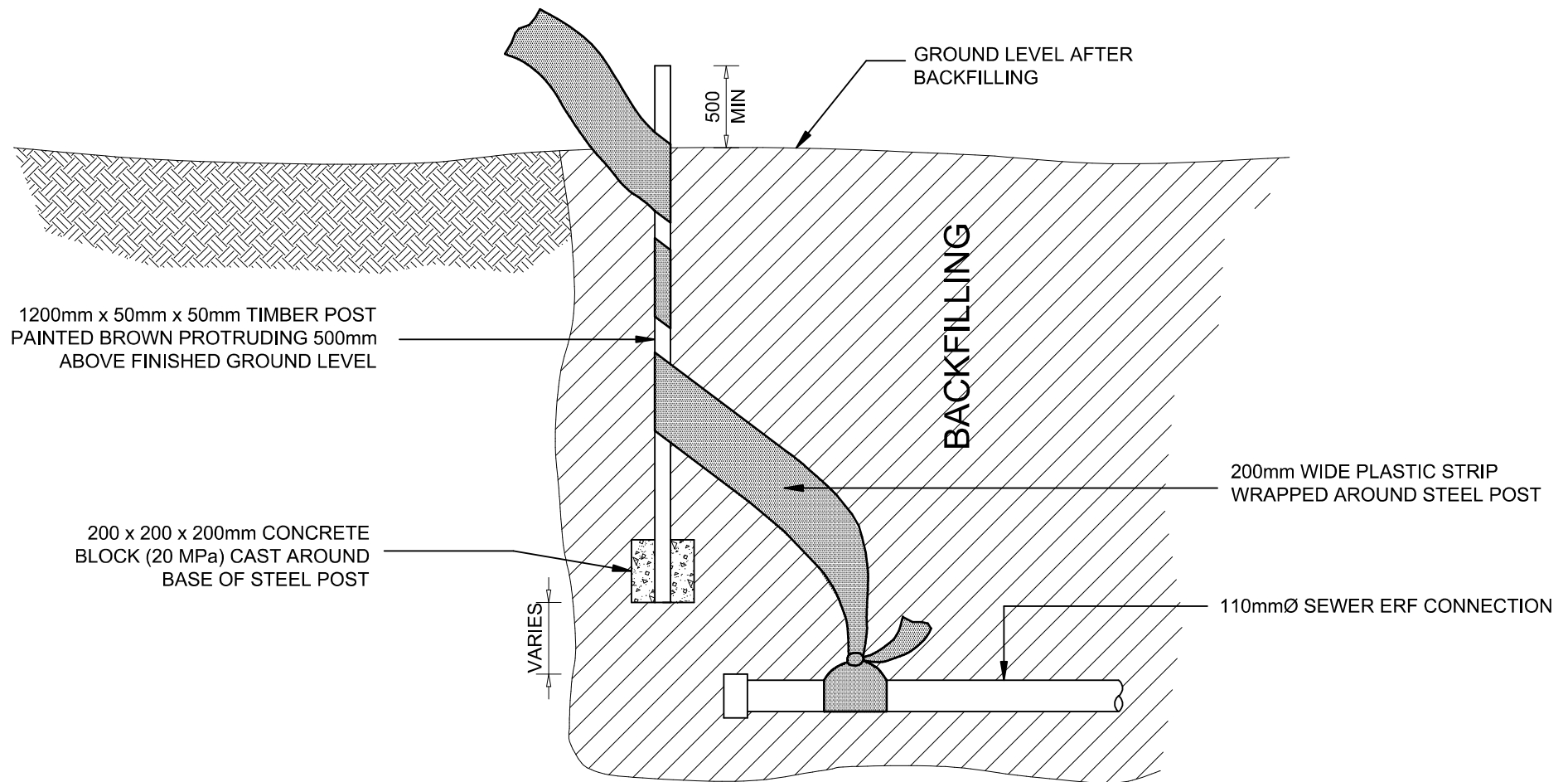
1 : 10

Paper Size

A4

Drawing No.

SS13



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

MARKER POST FOR SEWER ERF CONNECTION

Scale

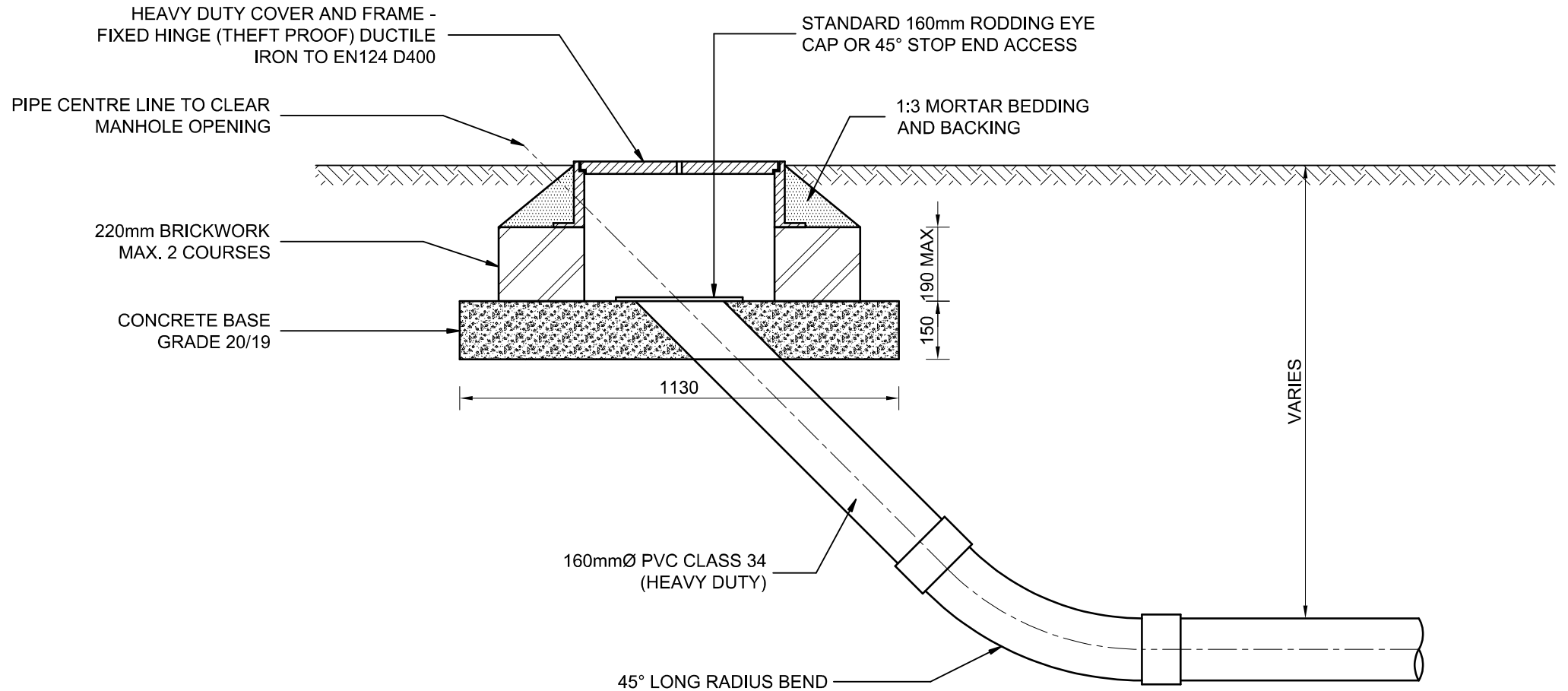
1 : 10

Paper Size

A4

Drawing No.

SS14



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

RODDING EYE

Scale

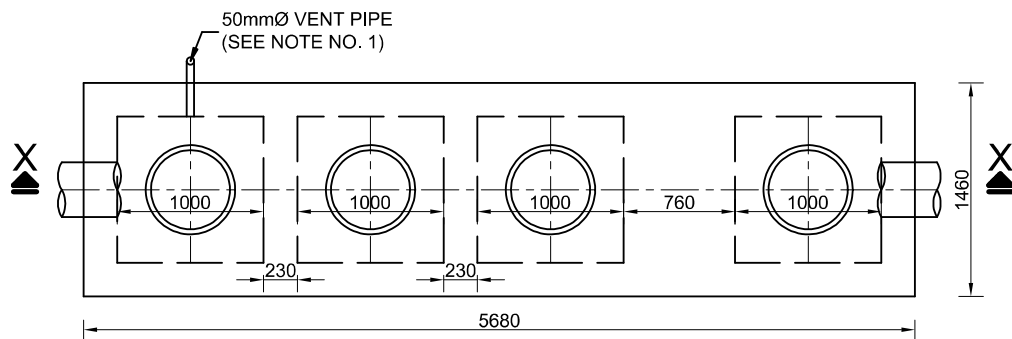
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Paper Size

A4

Drawing No.

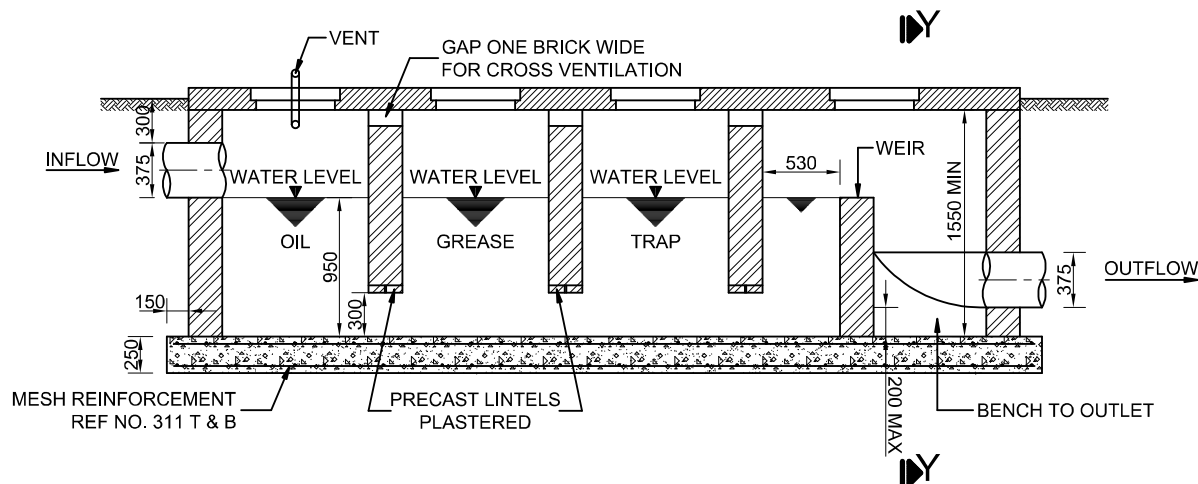
SS15



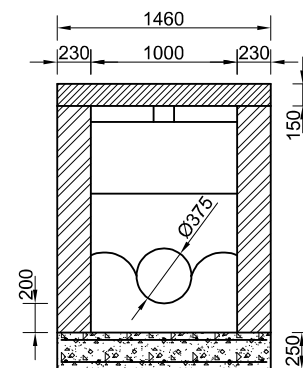
PLAN

NOTES:

1. EXTERNAL VENT PIPE 50mmØ. TO DISCHARGE IN AN AREA APPROVED BY AND TO THE FIRE REGULATIONS OF THE LOCAL AUTHORITY.
2. ALL COMPARTMENT WALLS AND FLOORS ARE TO BE PLASTERED IN A TWO COAT 1:2 CEMENT/SAND MORTAR FINISH WITH A WOOD FLOAT AND HAVING COMPLETE COVERAGE OF 12mm THICKNESS.
3. BRICK WORK TO BE 230mm IN ENGINEERING CLASS NFX TO SANS 227 GALVANIZED BRICKFORCE TO BE USED EVERY 3 COURSES.
4. EXTERNAL WALLS AND PORTION WALLS TO BE DESIGNED TO SUIT LOCAL SOILS CONDITIONS. REINFORCED CONCRETE MAY BE USED AS AN ALTERNATIVE.
5. TOP SLAB TO BE IN REINFORCED CONCRETE DESIGNED TO ACCOMMODATE THE LOCAL CONDITIONS.



SECTION X - X



SECTION Y - Y



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STANDARD DETAIL DRAWING

OIL / PETROL INTERCEPTING TRAP

Scale

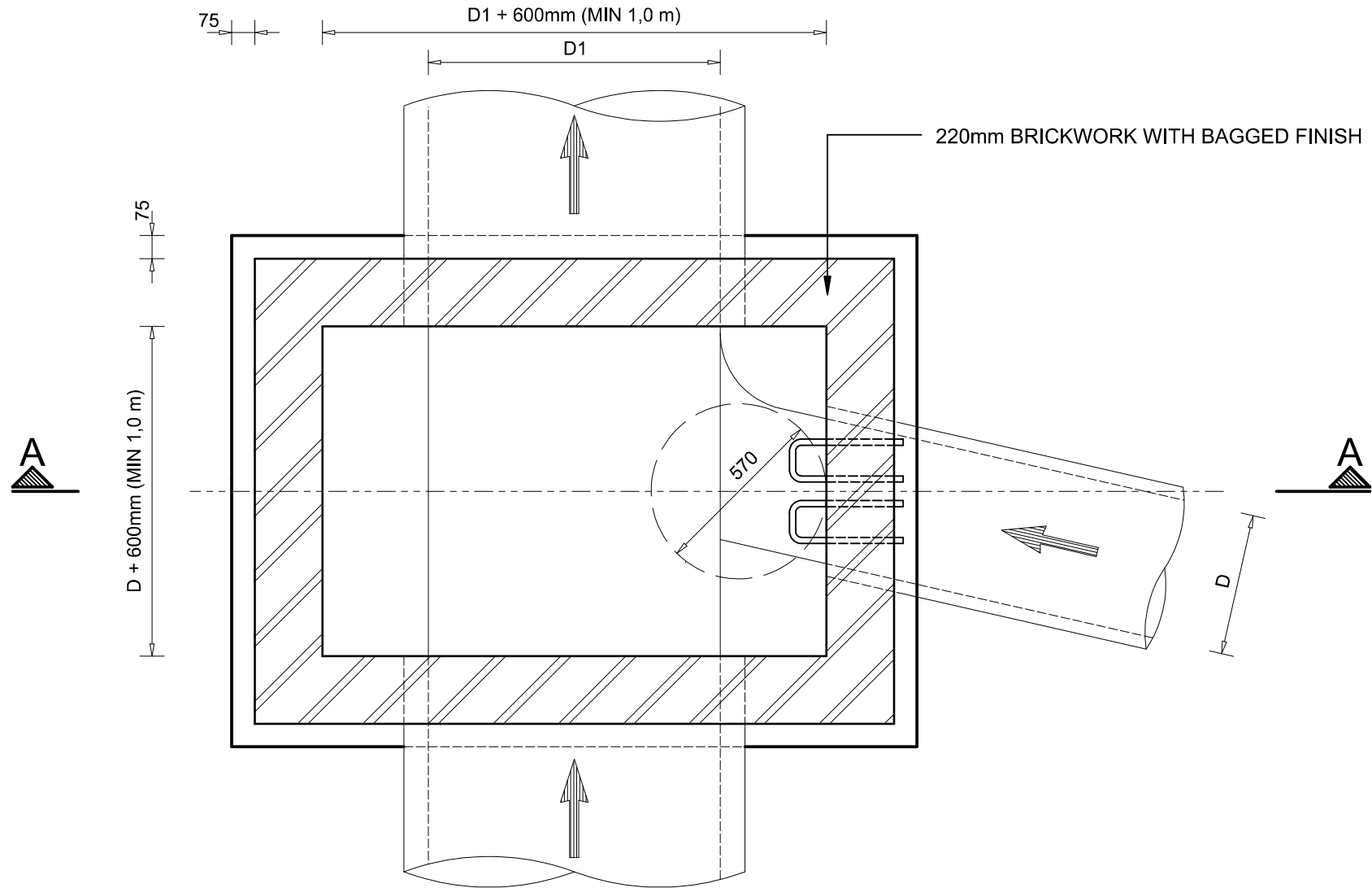
N.T.S.

Paper Size

A4

Drawing No.

SS16



SECTIONAL PLAN



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

MANHOLE : TYPE C - PLAN (1 OF 2)

Scale

1 : 20

Paper Size

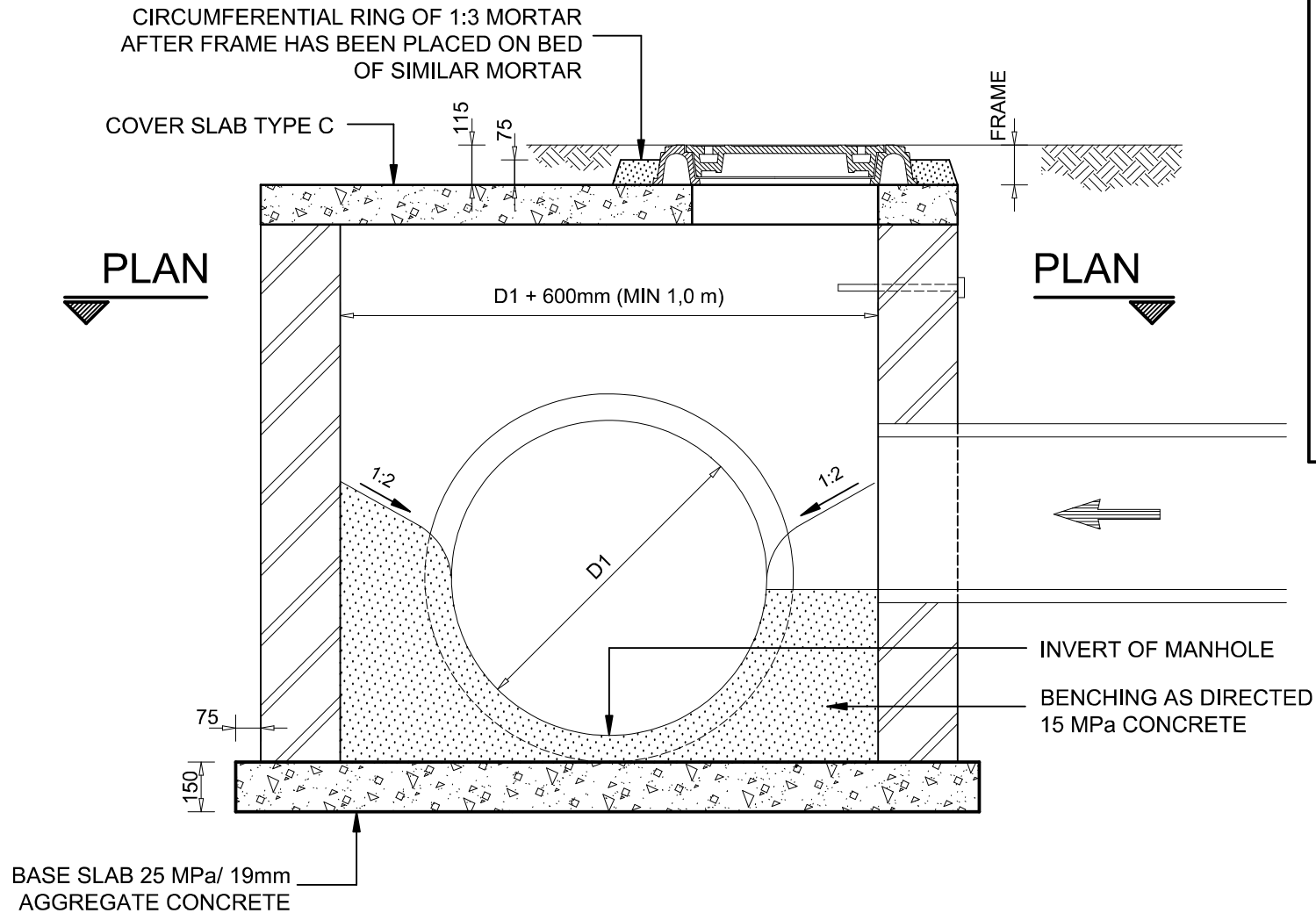
A4

Drawing No.

SSW1

NOTES:

1. HINGED DUCTILE IRON COVER AND FRAME: SANS 50124 CLASS D400 SECUREZ Z-600-D (LOCKABLE) OR SIMILAR APPROVED
2. FOR USE WHERE DEPTH FROM COVER TO INVERT LEVEL IS 2,5M OR LESS.
3. STEP IRONS TO BE INSTALLED WHERE DEPTH FROM COVER TO INVERT IS MORE THAN 1,0M.
4. STEP IRONS SHALL HAVE A VERTICAL SPACING OF 300MM AND BE STAGGERED ALTERNATIVELY LEFT AND RIGHT AT 300MM C/C.
5. PIPE AND BENCHING ARRANGEMENT TYPICAL. VARIES WITH LAYOUT.



SECTION A - A



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

MANHOLE : TYPE C - SECTION (2 OF 2)

Scale

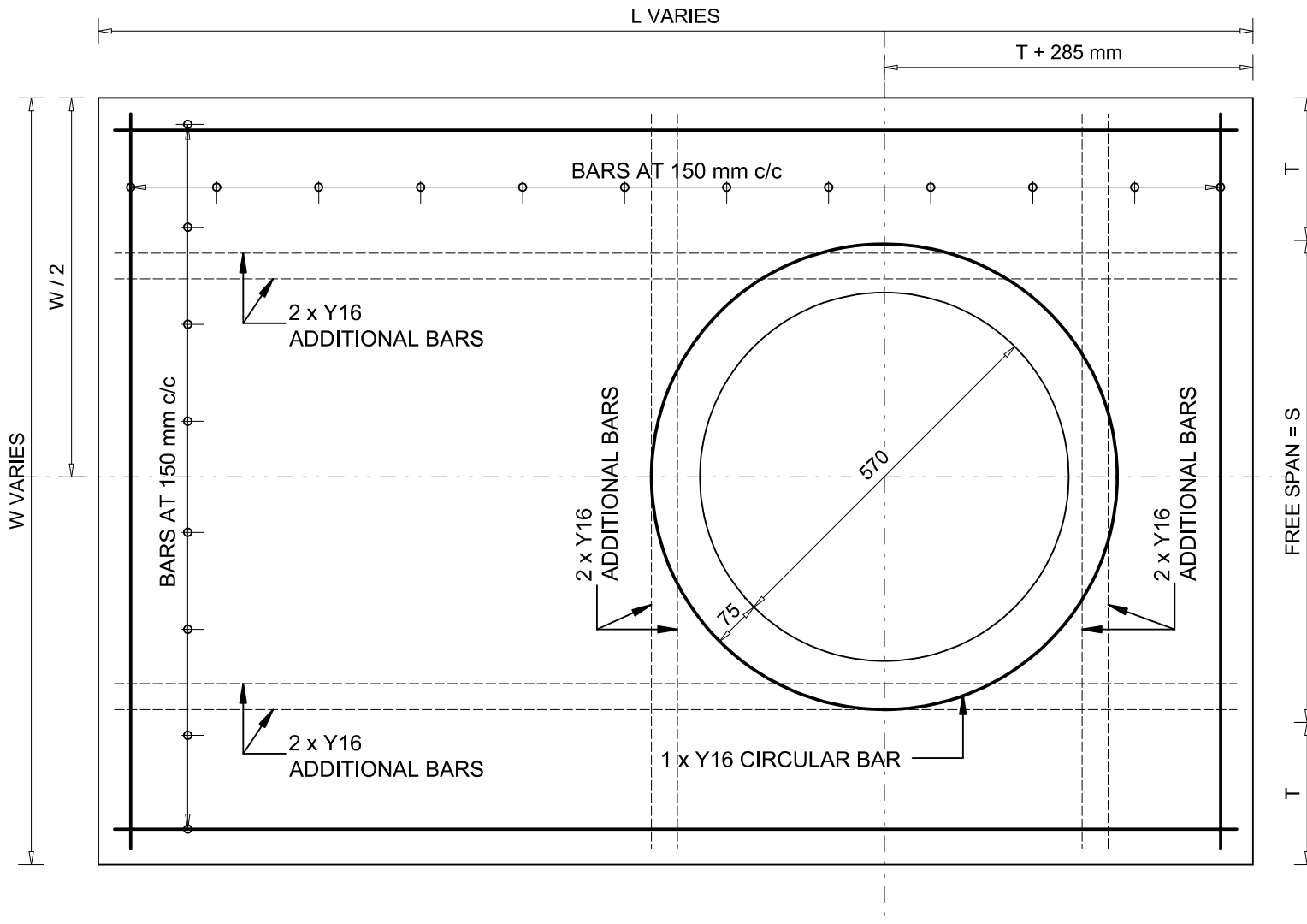
1 : 20

Paper Size

A4

Drawing No.

SSW2



S	SLAB THICKNESS	BAR Ø
0 TO 1,5	150	Y16
>1,5 TO 2.5	200	Y25

NOTES:

1. For use with Type C and D Manholes.
2. Concrete 25 MPa.
3. Minimum cover to reinforcement 25mm.
4. All reinforcement to be placed at bottom of slab.
Short span B1.
5. T: Wall width of brickwork.



STELLENBOSCH

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STANDARD DETAIL DRAWING

COVER SLAB : TYPE C

Scale

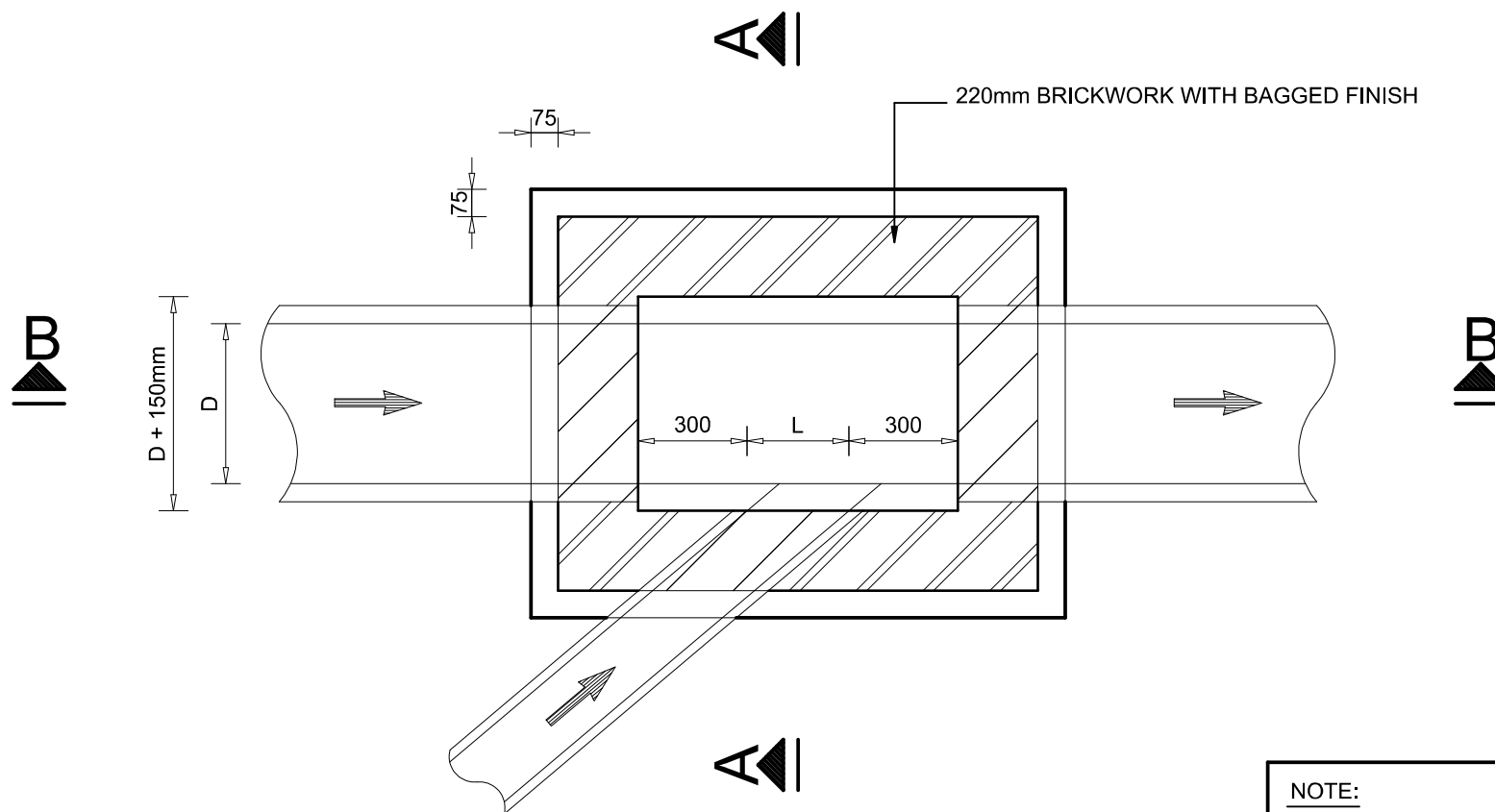
N.T.S.

Paper Size

A4

Drawing No.

SSW3



NOTE:

- TYPICAL PIPE AND BENCHING. VARIES TO SUIT LAYOUT
- D = INSIDE DIAMETER OF PIPE

PLAN LAYOUT



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

JUNCTION BOX : TYPE 1 - PLAN (1 OF 2)

Scale

1 : 20

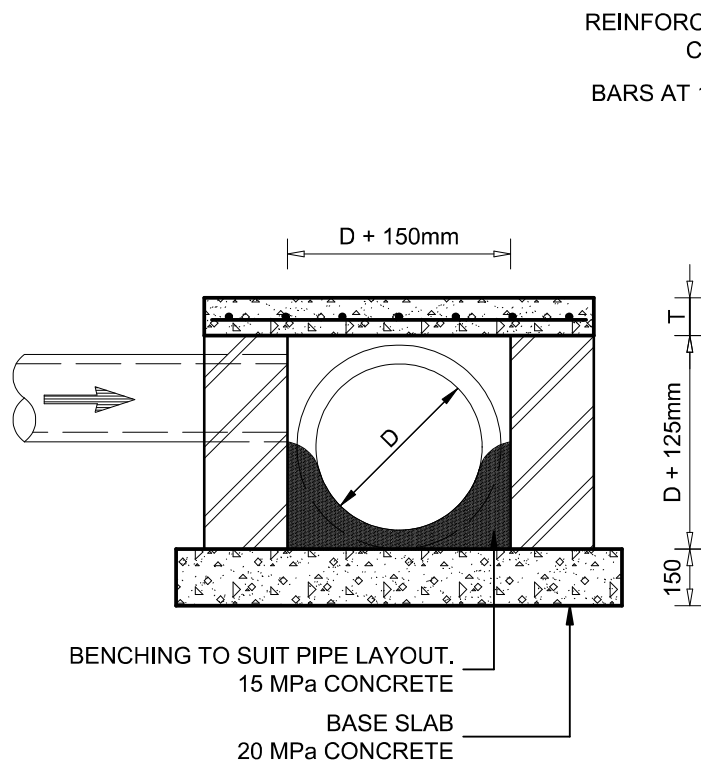
Paper Size

A4

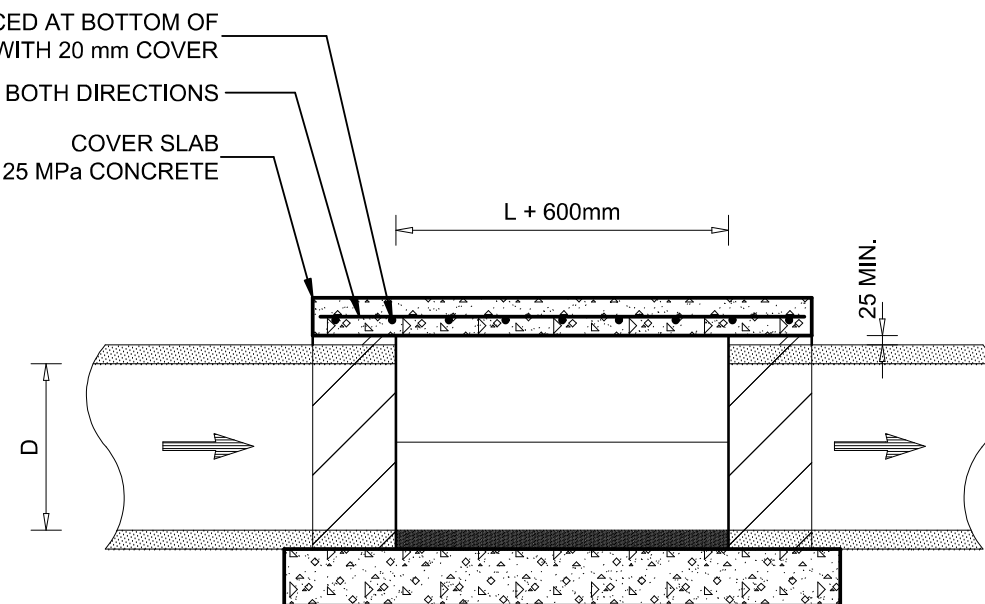
Drawing No.

SSW4

REINFORCEMENT		
FOR D + 150	SLAB THICKNESS T	BAR Ø
0,45 TO 0,8	100mm	Y12
0,8 TO 1,5	150mm	Y16
1,5 TO 2,5	200mm	Y25



SECTION A - A



SECTION B - B



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

JUNCTION BOX : TYPE 1 - SECTION (2 OF 2)

Scale

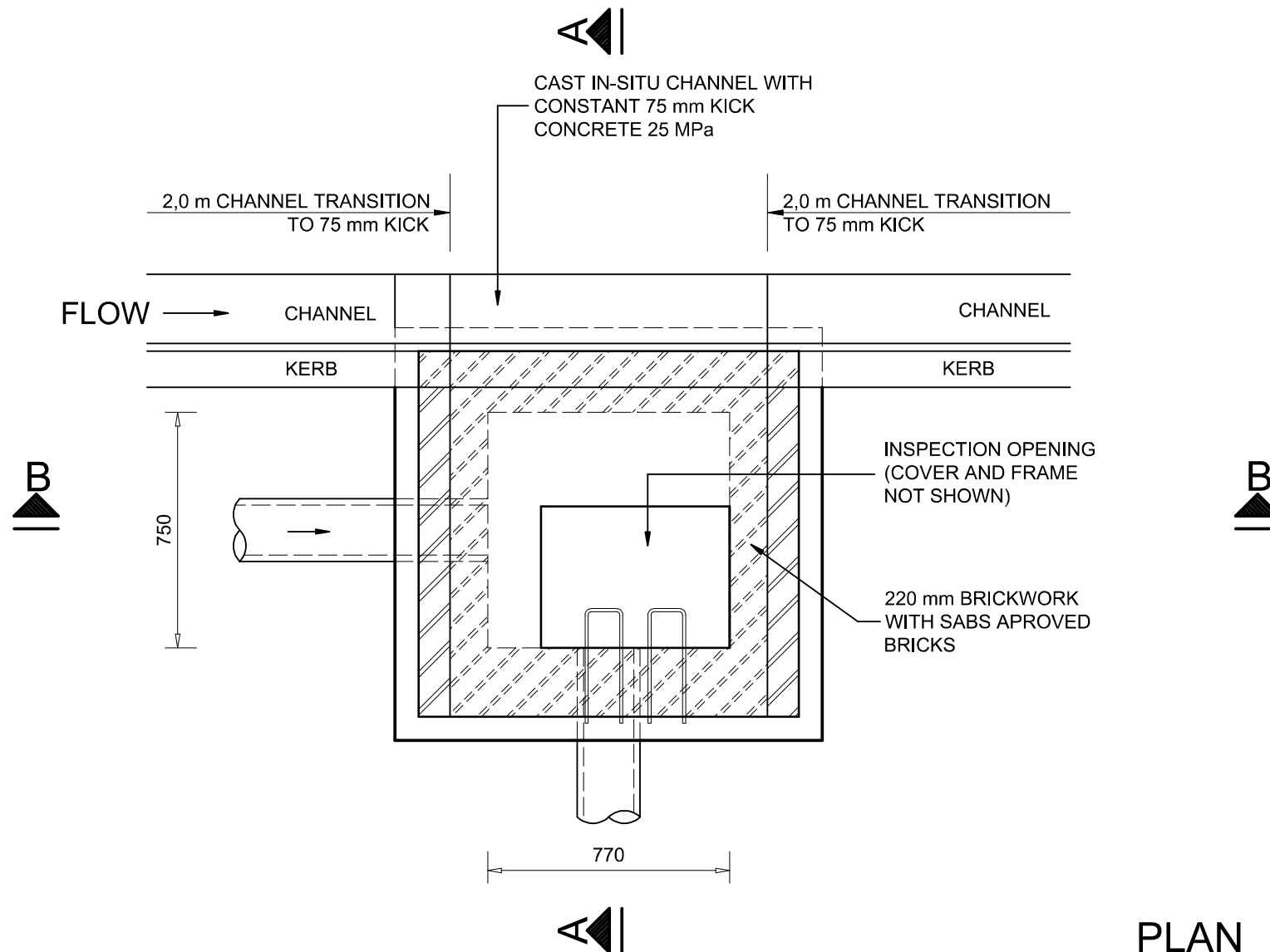
1 : 20

Paper Size

A4

Drawing No.

SSW5



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

CATCHPIT : TYPE A - PLAN (1 OF 3)

Scale

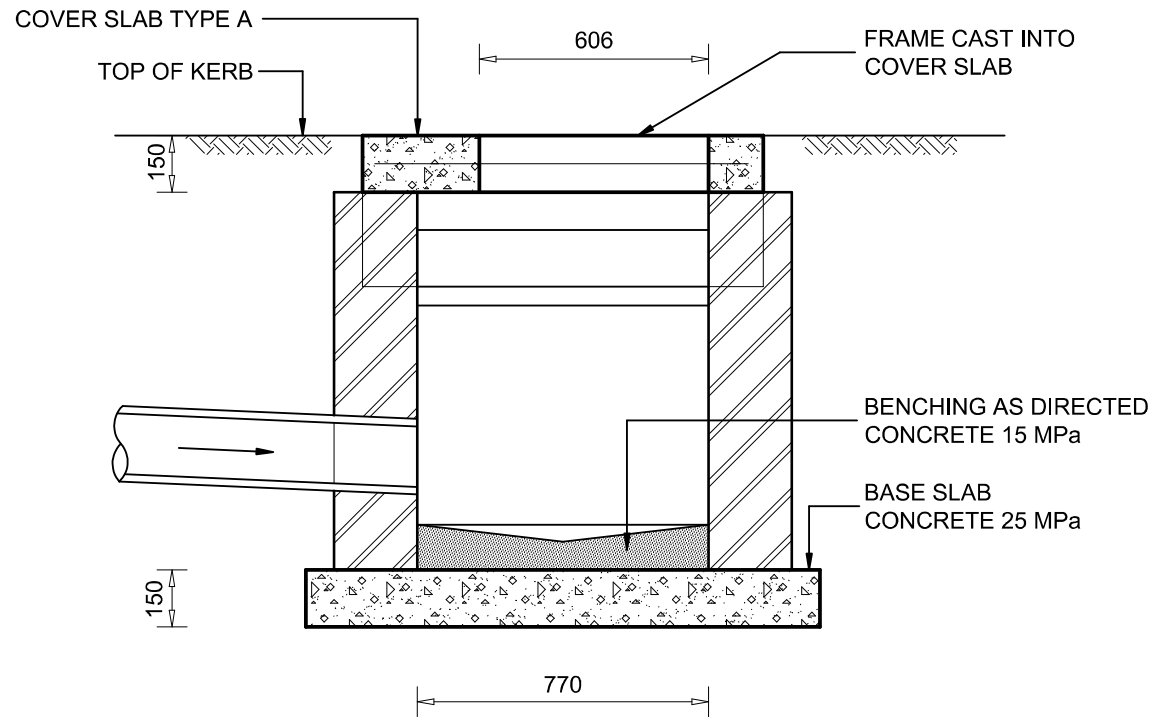
1 : 20

Paper Size

A4

Drawing No.

SSW7



SECTION B - B



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

CATCHPIT : TYPE A - SECTION B-B (2 OF 3)

Scale

1 : 20

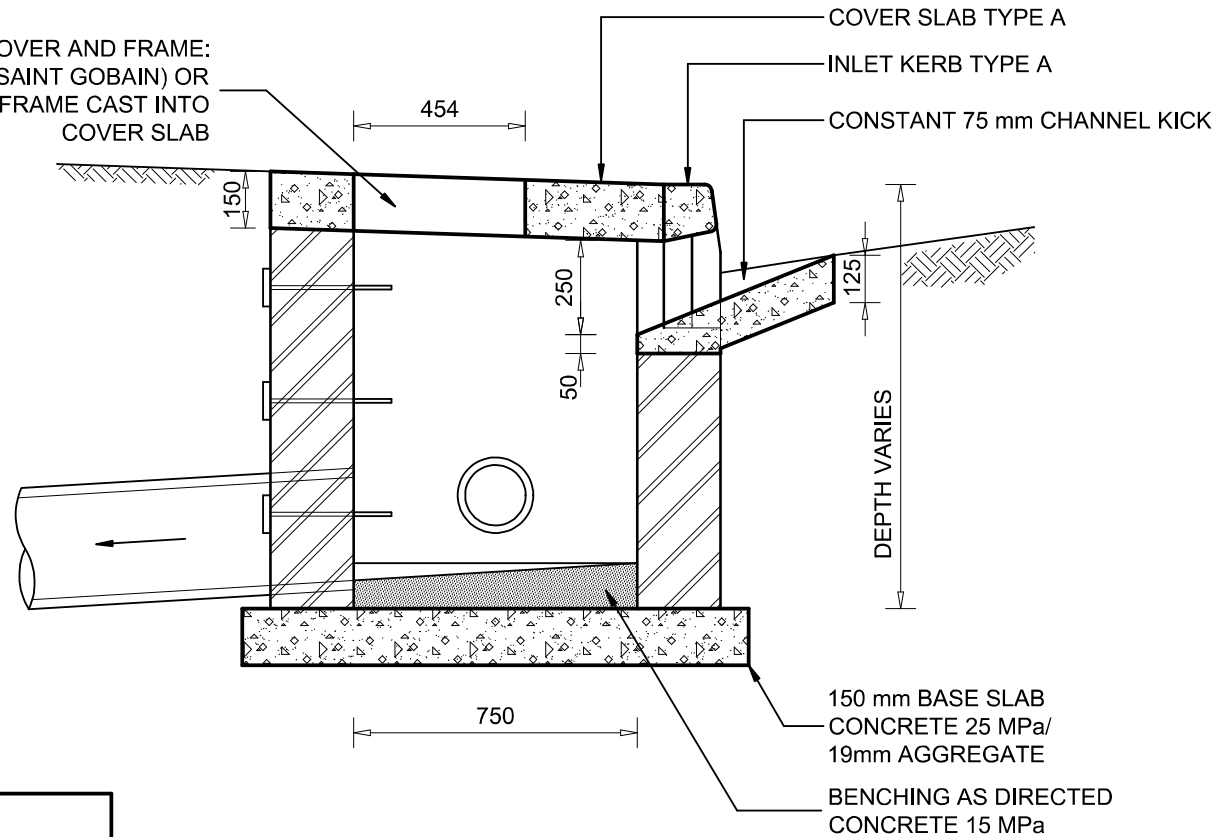
Paper Size

A4

Drawing No.

SSW8

HINGED AKSESS RANGE COVER AND FRAME:
SANS 50124 CLASS B125 (SAINT GOBAIN) OR
SIMILAR APPROVED. FRAME CAST INTO
COVER SLAB



SECTION A - A

NOTES:

1. STEP IRONS TO BE STAGGERED AND PLACED TO SUIT BENCHING AT 300 mm c/c INTERVALS.
2. PIPE AND BENCHING ARRANGEMENT TYPICAL. VARIES WITH CIRCUMSTANCES.



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

CATCHPIT : TYPE A - SECTION A-A (3 OF 3)

Scale

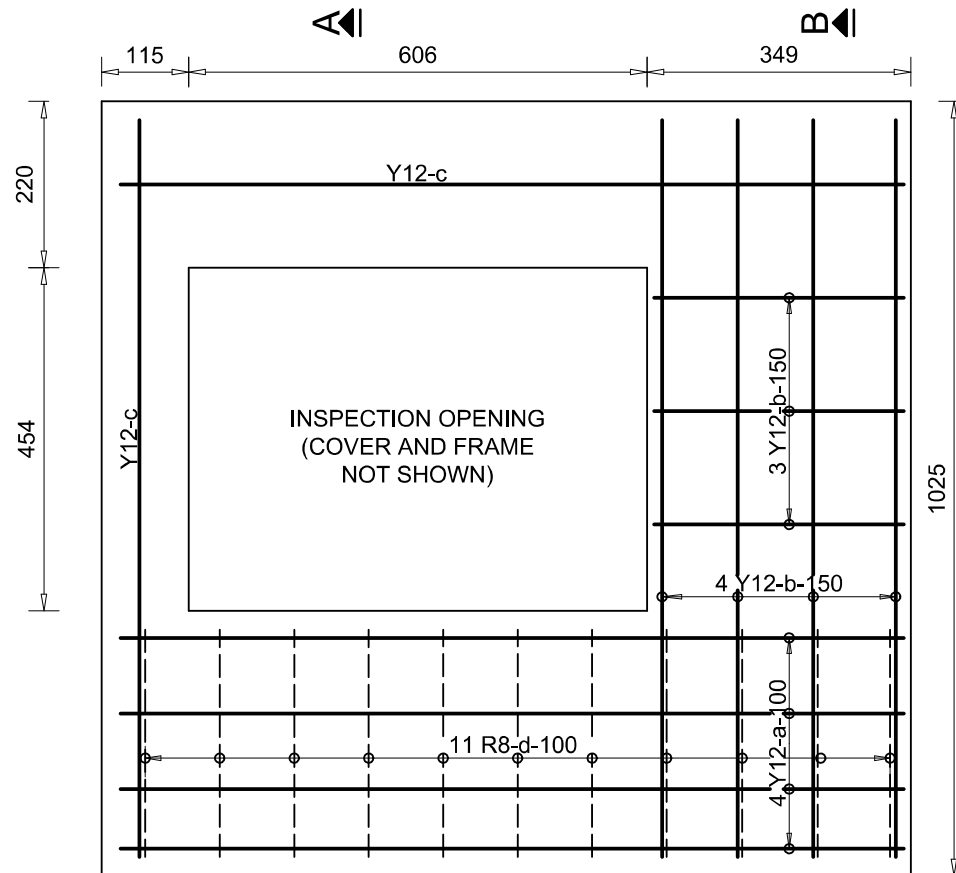
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Paper Size

A4

Drawing No.

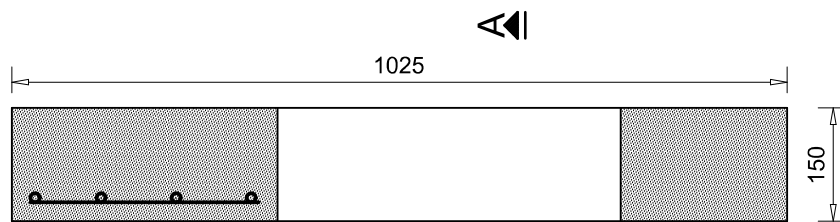
SSW9



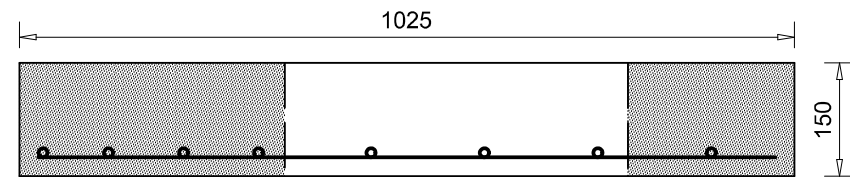
NOTES:

1. For use with Type A catchpits with max pipe diameter of 750mm.
2. Concrete 25 MPa.
3. 20mm Minimum cover over all reinforcement
4. Cover to be cast into cover slab
5. Cover slab to be in-situ.
6. Wood float finish to top of slab.

PLAN LAYOUT ON BOTTOM REINFORCEMENT



SECTION A - A



SECTION B - B



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

COVER SLAB : TYPE A

Scale

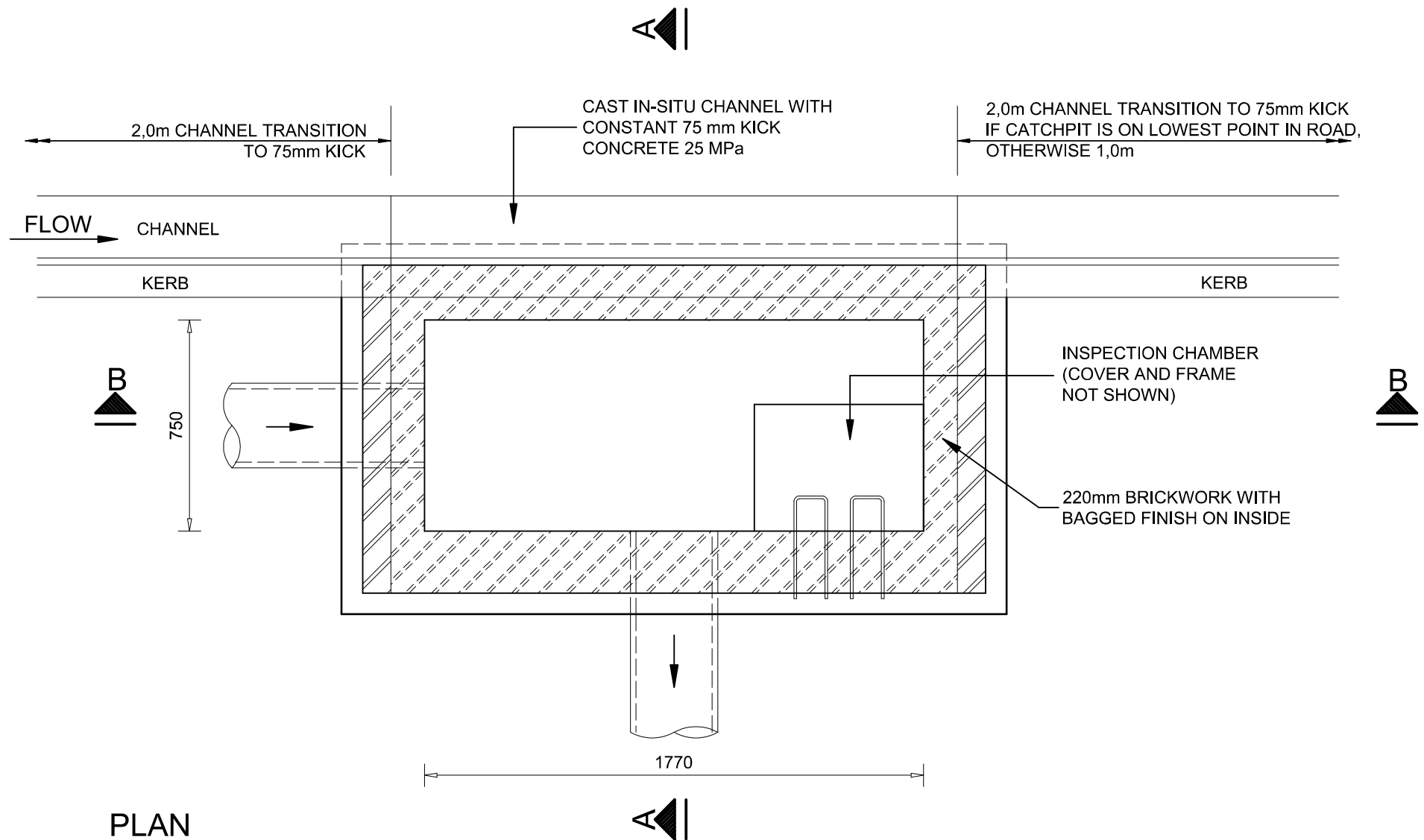
1 : 10

Paper Size

A4

Drawing No.

SSW10



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

CATCHPIT : TYPE B - PLAN (1 OF 3)

Scale

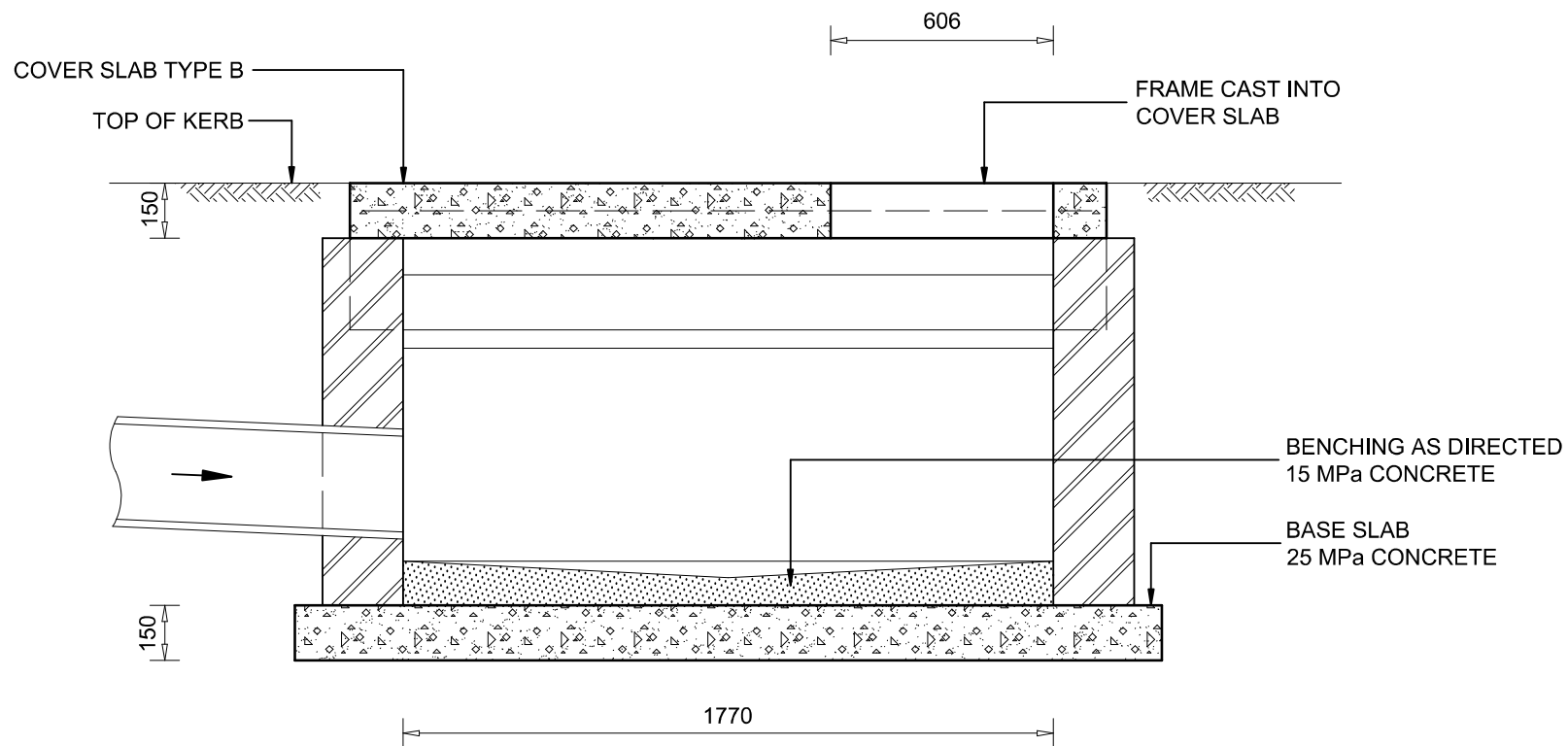
1 : 20

Paper Size

A4

Drawing No.

SSW11



SECTION B - B



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

CATCHPIT : TYPE B - SECTION B-B (2 OF 3)

Scale

1 : 20

Paper Size

A4

Drawing No.

SSW12

HINGED AKSESS RANGE COVER AND FRAME:
SANS 50124 CLASS B125 (SAINT GOBAIN) OR
SIMILAR APPROVED. FRAME CAST INTO
COVER SLAB

WOOD FLOAT FINISH

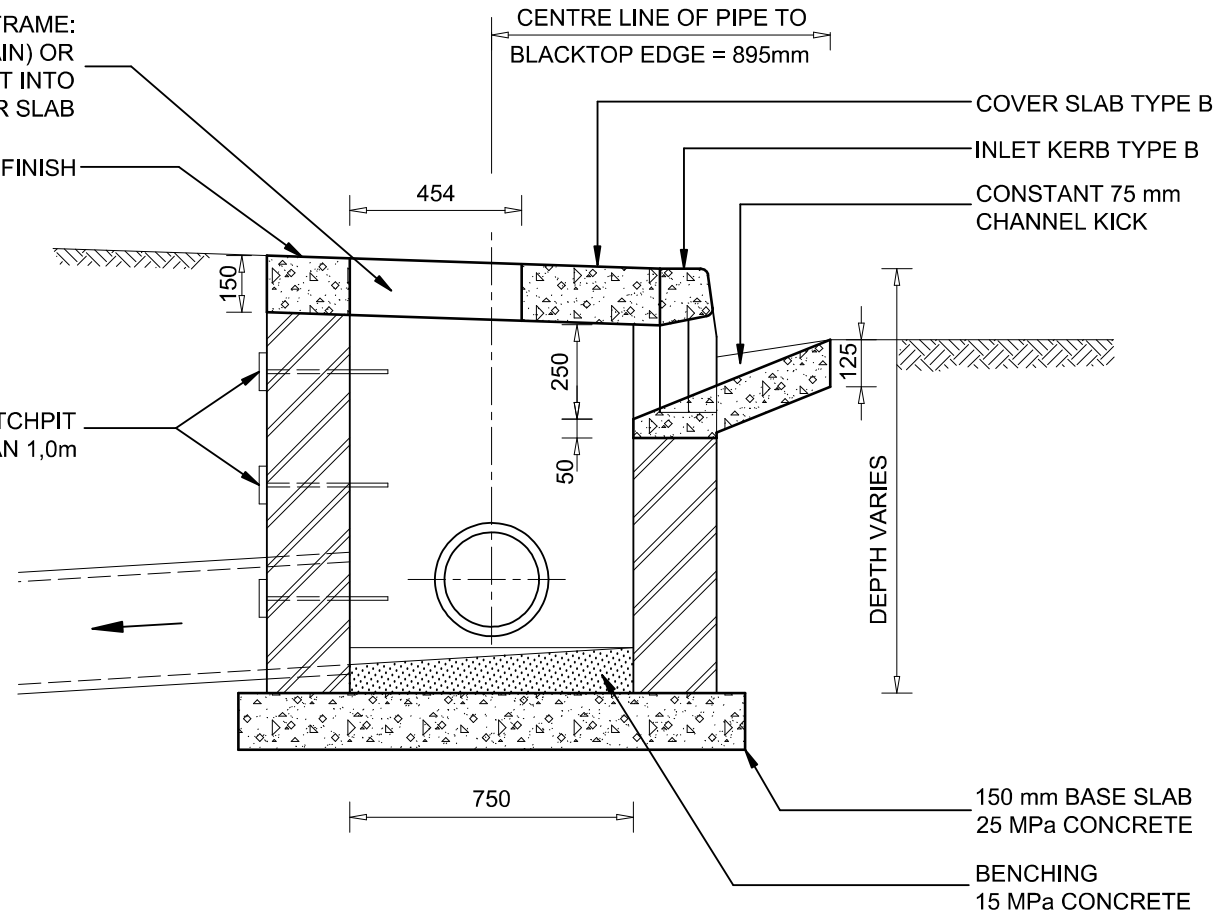
CENTRE LINE OF PIPE TO
BLACKTOP EDGE = 895mm

COVER SLAB TYPE B

INLET KERB TYPE B

CONSTANT 75 mm
CHANNEL KICK

STEP IRONS IF CATCHPIT
IS DEEPER THAN 1,0m



SECTION A - A

NOTES:

1. STEP IRONS TO BE STAGGERED & PLACED AT 300mm SPACING FOR CATCHPITS DEEPER THAN 1,0.
2. PIPE AND BENCHING VARIES TO SUIT LAYOUT.



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

CATCHPIT : TYPE B - SECTION A-A (3 OF 3)

Scale

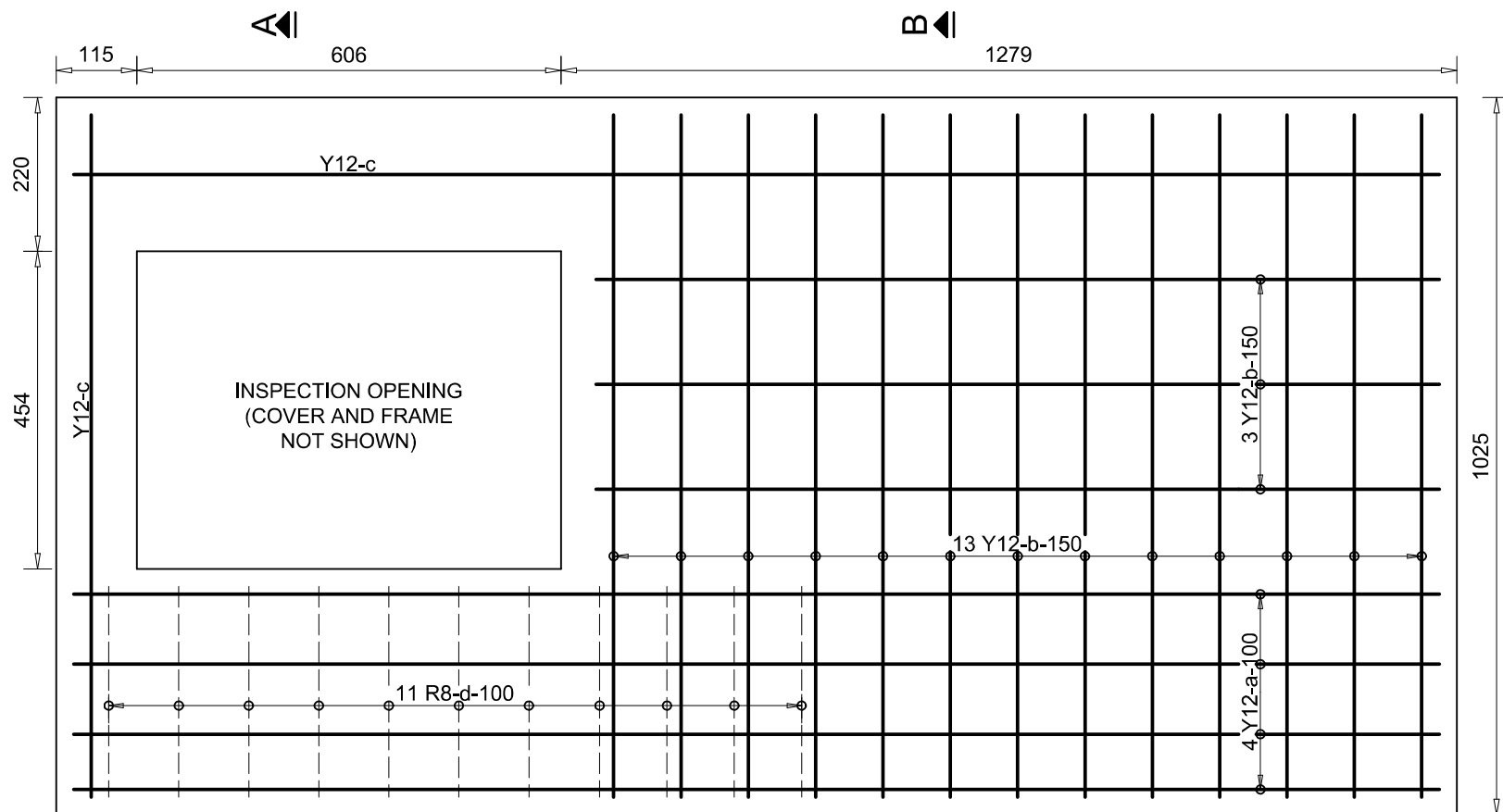
1 : 20

Paper Size

A4

Drawing No.

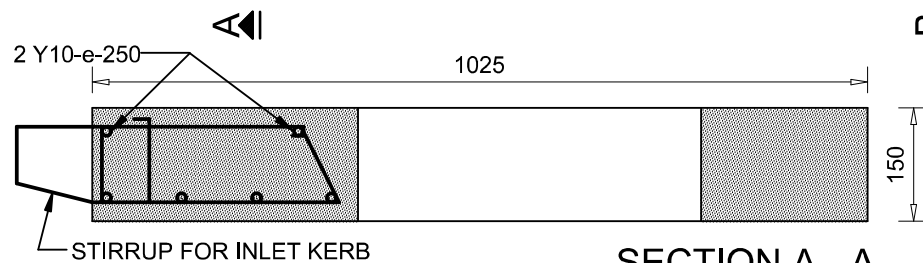
SSW13



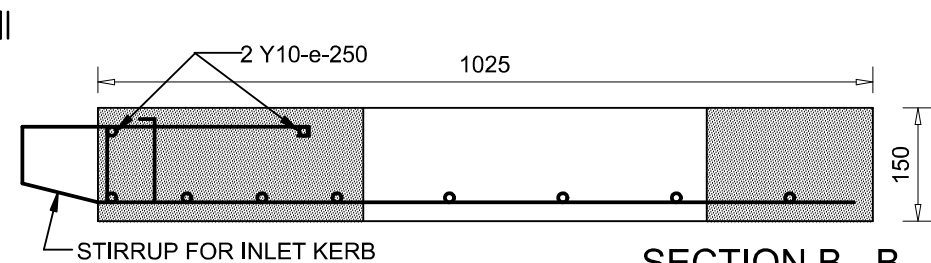
NOTES:

1. For use with Type B catch-pits with max pipe diameter of 750mm.
2. Concrete 25 MPa.
3. 20mm Minimum cover over all reinforcement
4. Cover to be cast into cover slab
5. Cover slab to be in-situ and reinforcement of cover slab to be joint with stirrups of inlet kerb.
6. Wood float finish to top of slab.

PLAN LAYOUT OF BOTTOM REINFORCEMENT



SECTION A - A



SECTION B - B



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

COVER SLAB : TYPE B

Scale

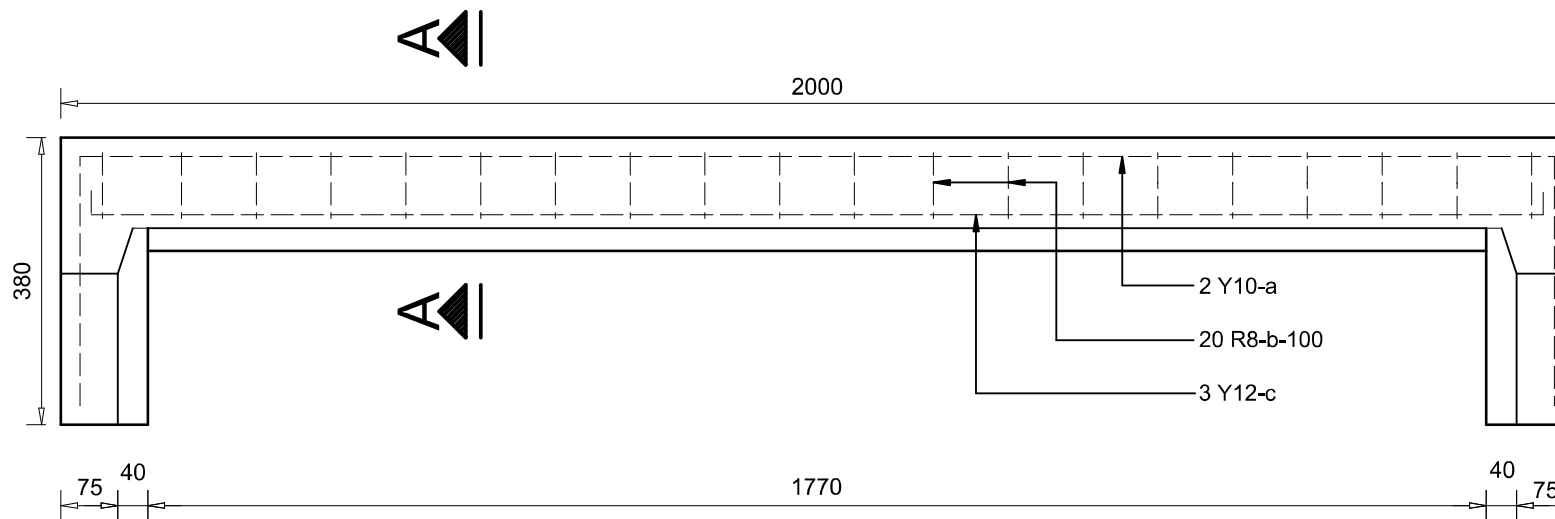
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Paper Size

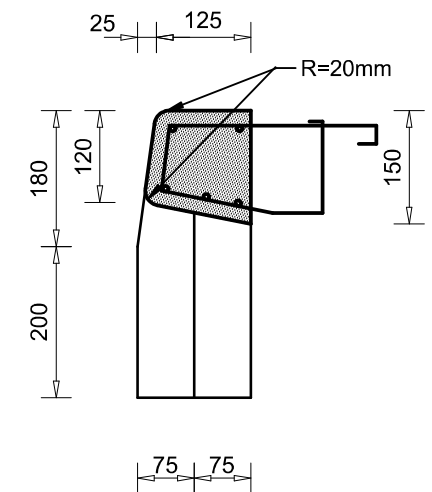
A4

Drawing No.

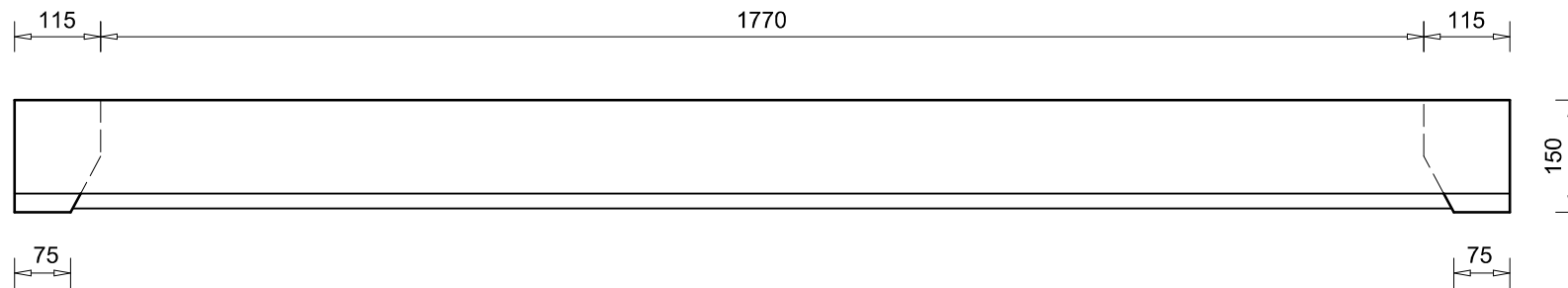
SSW14



FRONT ELEVATION



SECTION A-A



PLAN



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STANDARD DETAIL DRAWING

INLET KERB : TYPE B (1 OF 2)

Scale

1 : 10

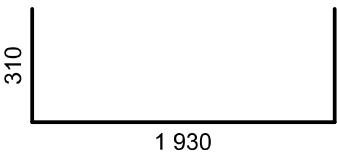
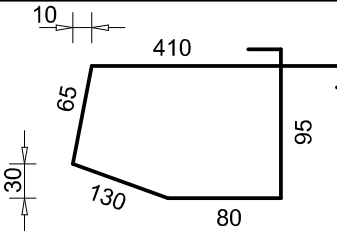
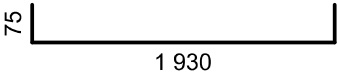
Paper Size

A4

Drawing No.

SSW15

SCHEDULE FOR INLET KERB -TYPE B-

MARK	TOTAL	Ø	BENDING DETAILS
a	2	Y10	
b	20	R8	
c	3	Y12	

NOTES:

1. CONCRETE 25 MPa
= 1 BAG CEMENT : 90 LITRE SAND : 110 LITRE STONE (1 : 2,4 : 2,9)
2. COVER TO REINFORCEMENT = 20 mm



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INLET KERB : TYPE B (2 OF 2)

Scale

1 : 10

Paper Size

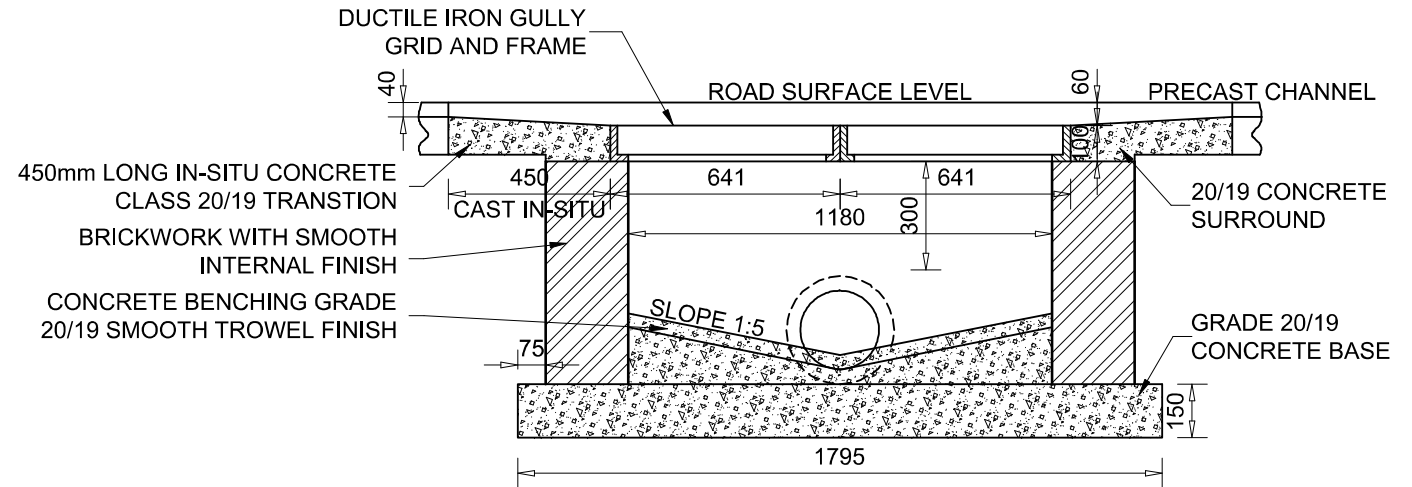
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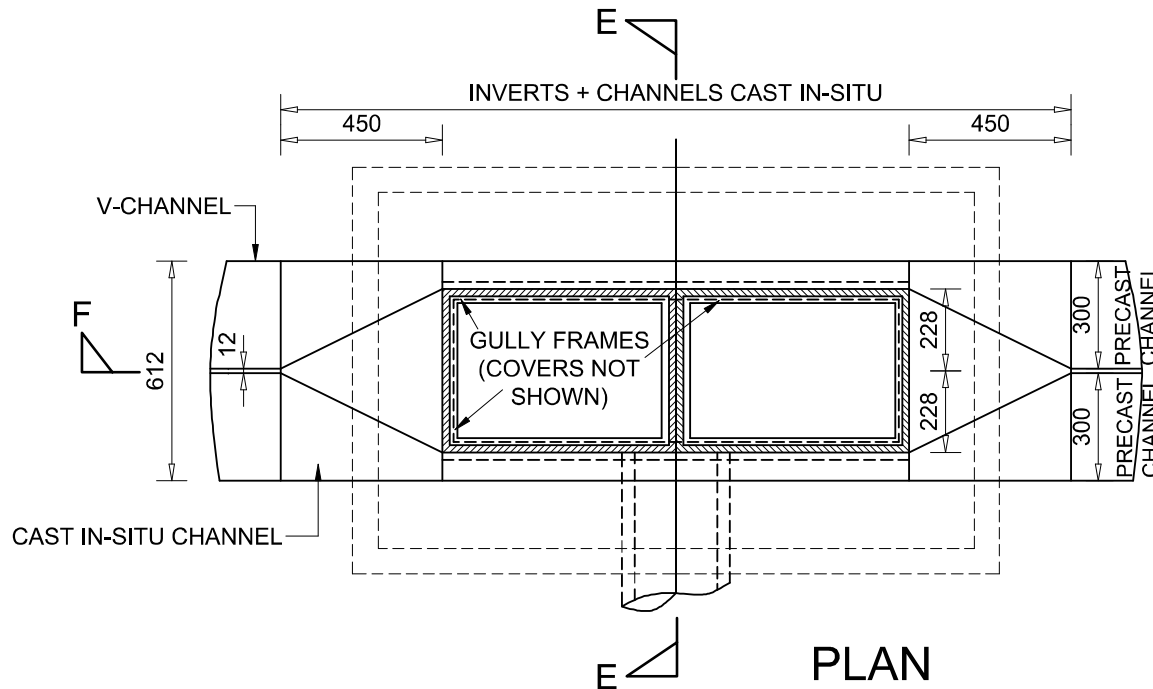
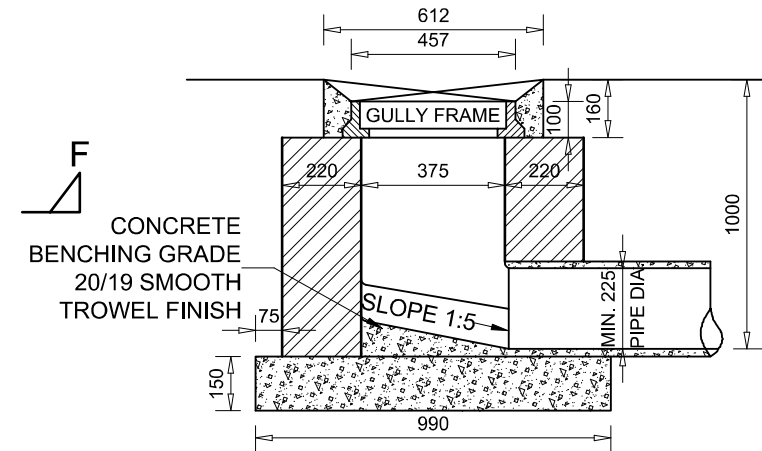
SSW16

NOTES:

1. HINGED COVERS ARE TO OPEN TOWARDS SIDEWALK AND NOT ROAD.
2. BENCHING NOT REQUIRED IN SANDY AREAS.
3. MAX. DEPTH TO BE 1m.
4. BRICKWORK - TO BE ENGINEERING CLASS NFX TO SANS 227.



SECTION F - F



SECTION E - E



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STANDARD DETAIL DRAWING

DOUBLE GULLY GRID CATCHPIT

Scale

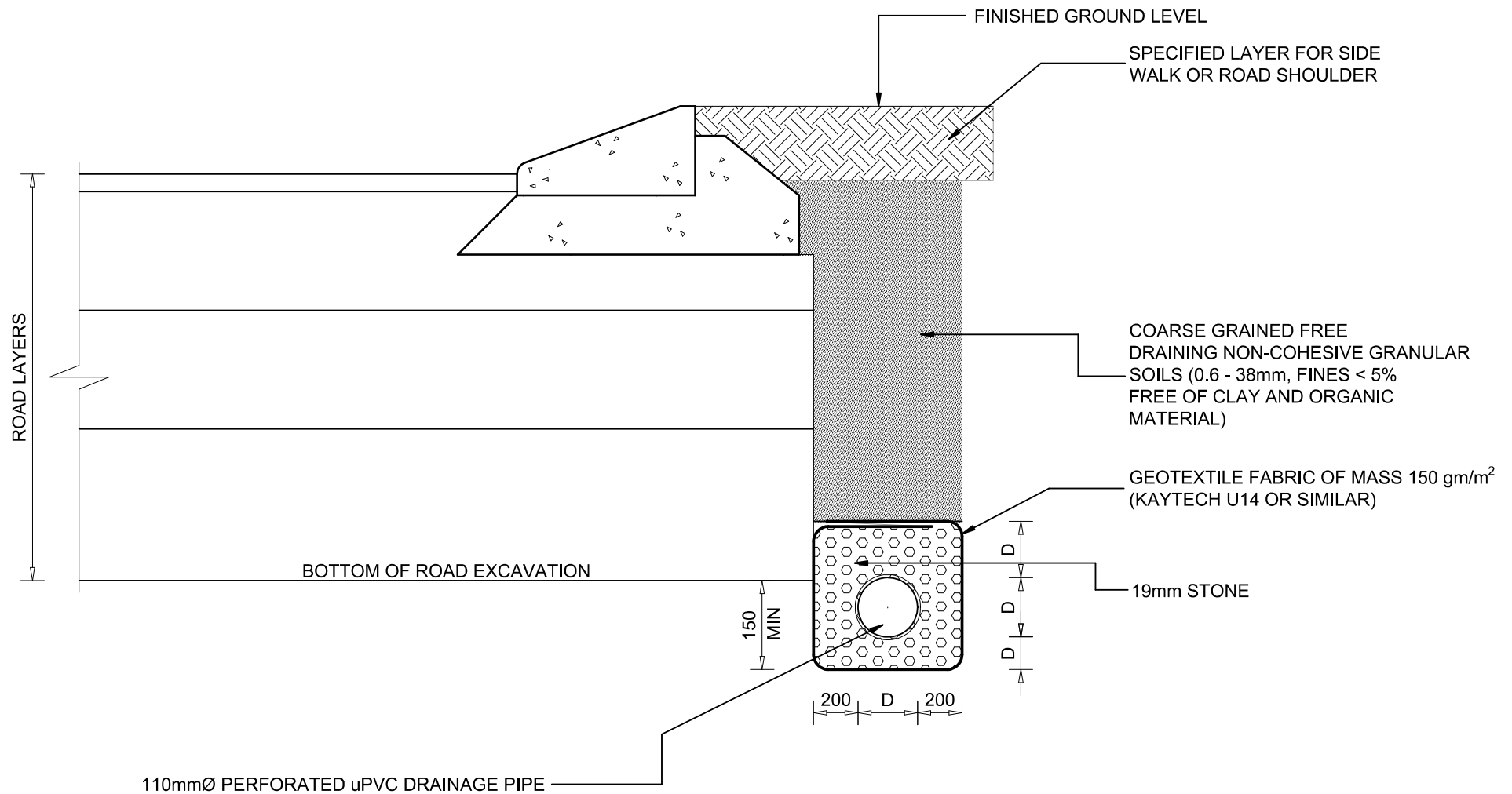
N.T.S.

Paper Size

A4

Drawing No.

SSW17



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STANDARD DETAIL DRAWING

SUB SURFACE DRAIN : TYPE 1 (STONE)

Scale

1 : 10

Paper Size

A4

Drawing No.

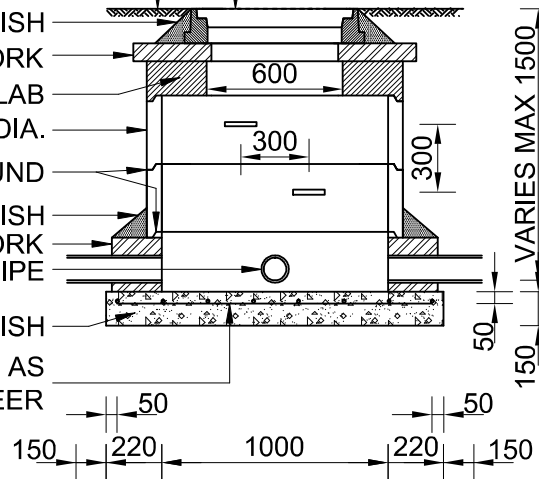
SSW18

NOTES:

1. BENCHING REQUIRED TO PREVENT STANDING WATER.
2. BRICKWORK - ENGINEERING CLASS NFX
3. MORTAR FOR BRICKWORK TO BE 1:3
4. WHERE DEPTH > 1000 USE STANDARD SW MANHOLE

HINGED COVER AND FRAME : DUCTILE IRON CLASS B125
(SANS 50124) SAINT GOBAIN (AKSESS RANGE) OR
SIMILAR APPROVED
ROAD OR FOOTWAY LEVEL (OR AS DIRECTED BY ENGINEER)

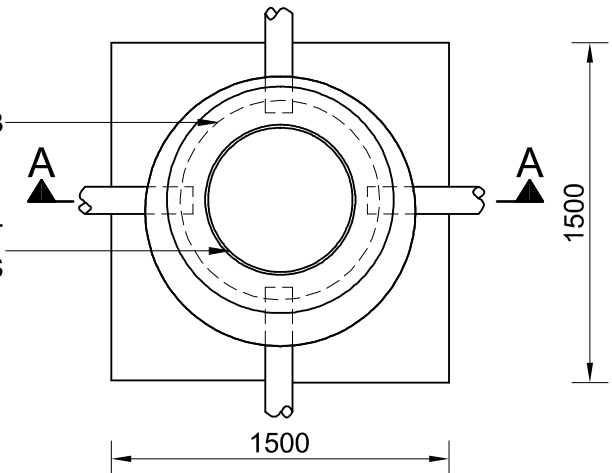
MORTAR 1:3 BEDDING AND BACKING TROWEL FINISH
MIN. 1 COURSE, MAX. 3 COURSES BRICKWORK
PRECAST CONCRETE COVER SLAB
PRECAST CONCRETE RING 1000 DIA.
PERFORMED PETROLATUM FLEXIBLE JOINING COMPOUND
MORTAR 1:3 BEDDING AND BACKING TROWEL FINISH
BRICKWORK
110mmØ OR 160mmØ SUB-SOIL PIPE
CONCRETE SLAB GRADE 20/19 TROWEL FINISH
MIN. MESH REINFORCEMENT REF NO. 311 OR AS
DIRECTED BY THE ENGINEER



SECTION A - A

PRECAST CONCRETE SLAB

ACCESS SHAFT OFFSET
TO SUIT STEP IRONS



PLAN



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STANDARD DETAIL DRAWING

MANHOLE FOR SUB SURFACE DRAIN

Scale

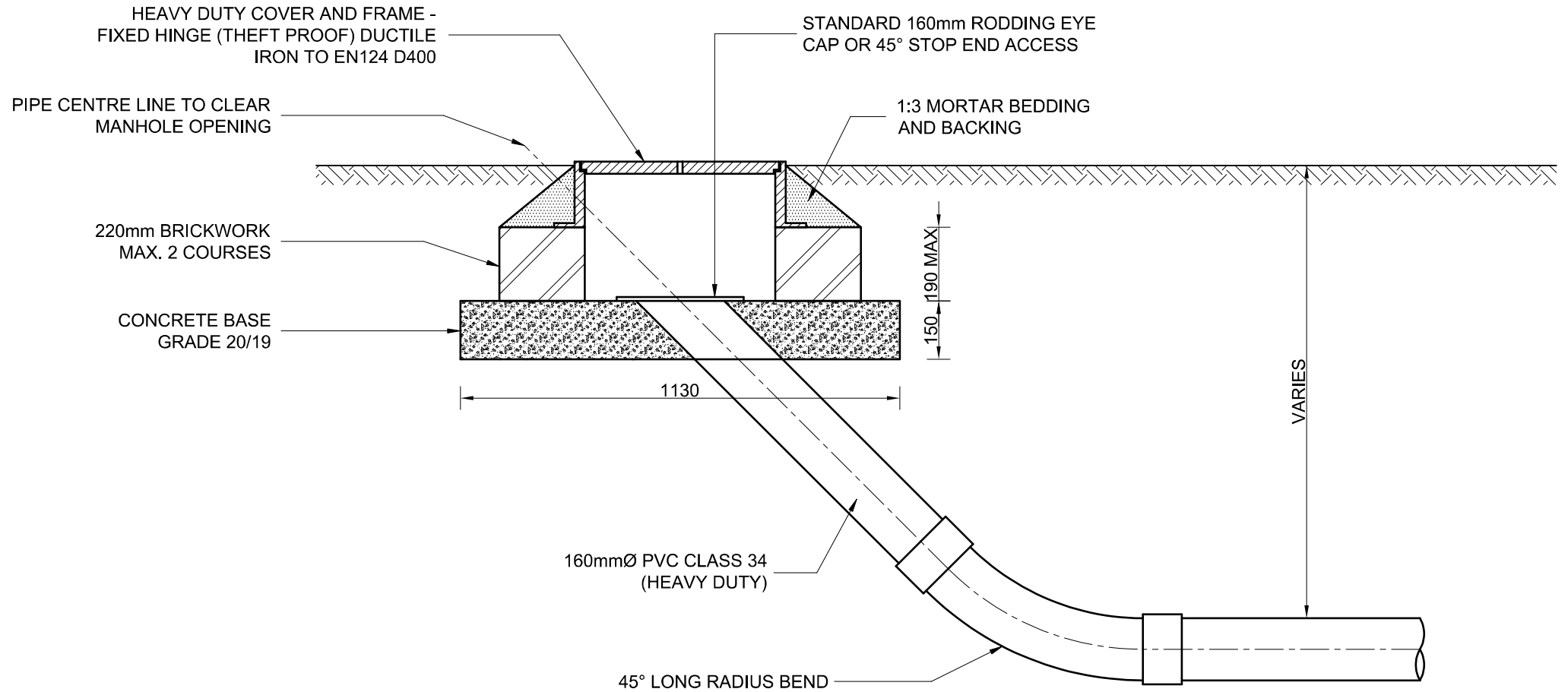
N.T.S.

Paper Size

A4

Drawing No.

SSW19



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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

RODDING EYE FOR SUBSOIL DRAINS

Scale

N.T.S.

Paper Size

A4

Drawing No.

SSW20

LEGEND

SBP = SHOULDER BREAK POINT

= UNLESS OTHERWISE INDICATED IN THE PROJECT SPECIFICATIONS

SBP = SHOULDER BREAK POINT

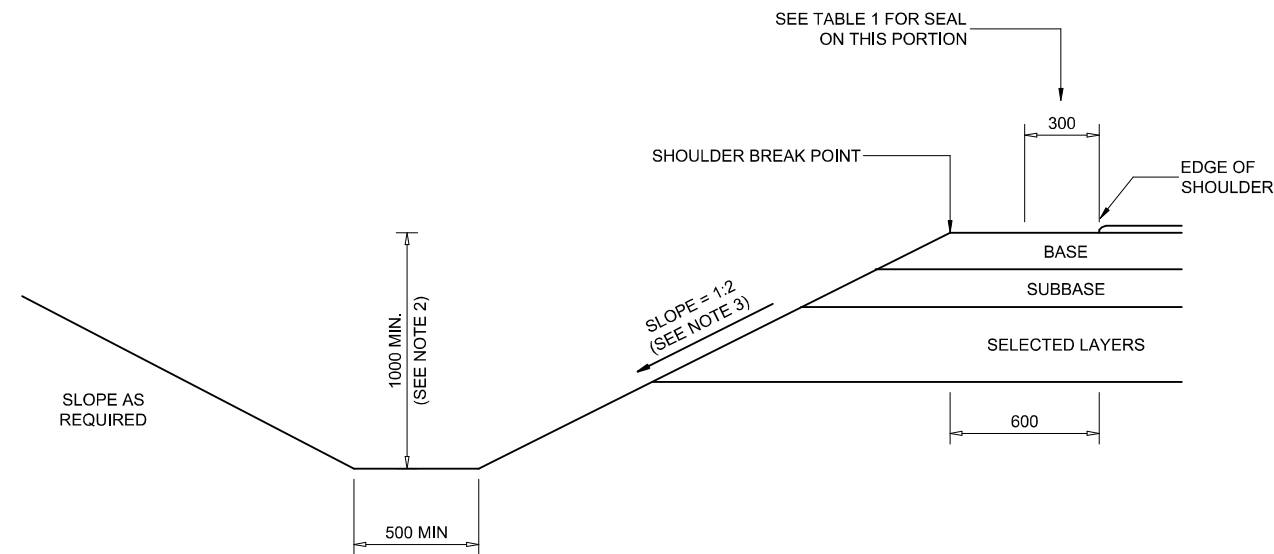
= UNLESS OTHERWISE INDICATED IN THE PROJECT SPECIFICATIONS

SBP = SHOULDER BREAK POINT

= UNLESS OTHERWISE INDICATED IN THE PROJECT SPECIFICATIONS



APPLICATION CRITERIA	<ul style="list-style-type: none"> • SLOPE < 0.5% • SLOPE > 2.0% • WHERE SPECIFIED BY THE ENGINEER 	<ul style="list-style-type: none"> • WHERE SPECIFIED BY THE ENGINEER 	<ul style="list-style-type: none"> • 0.5% < SLOPE < 2.0% • WHERE SPECIFIED BY THE ENGINEER
SUBSOIL DRAIN	COMPULSORY	<ul style="list-style-type: none"> • WHERE SPECIFIED BY THE ENGINEER SUBJECT TO APPROVAL OF STELLENBOSCH MUNICIPALITY 	<ul style="list-style-type: none"> • WHERE SPECIFIED BY THE ENGINEER SUBJECT TO APPROVAL OF STELLENBOSCH MUNICIPALITY



UNLINED EARTH SIDE DRAIN

CONSTRUCT LINED
SIDE DRAIN IF
VELOCITY > 1.5 m/s

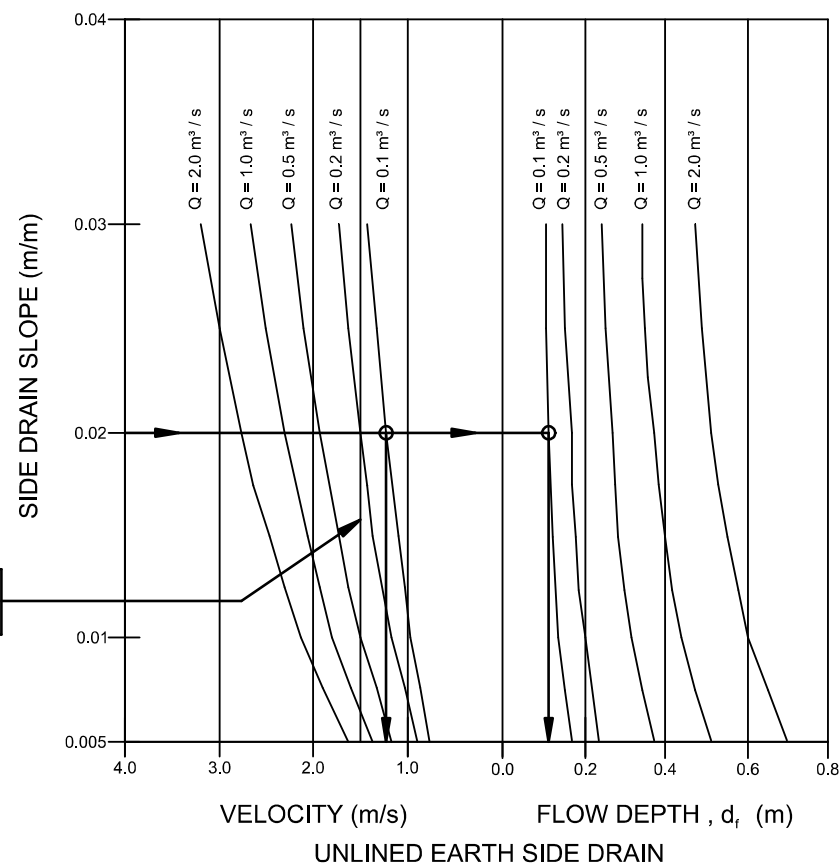
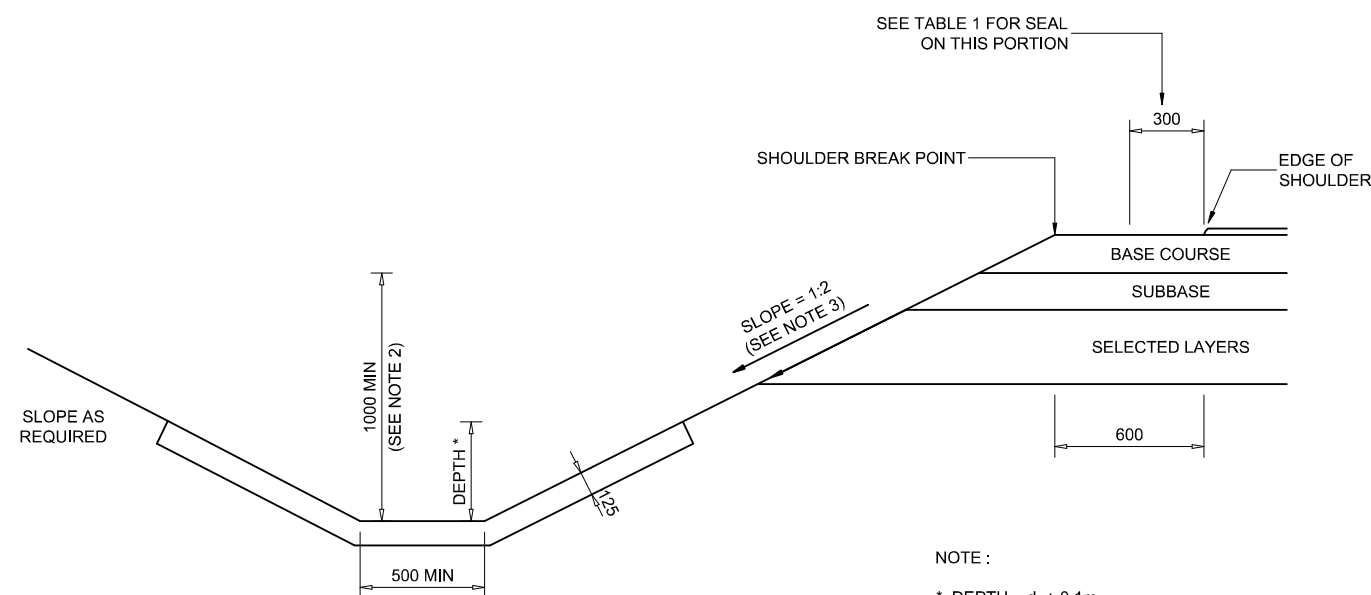


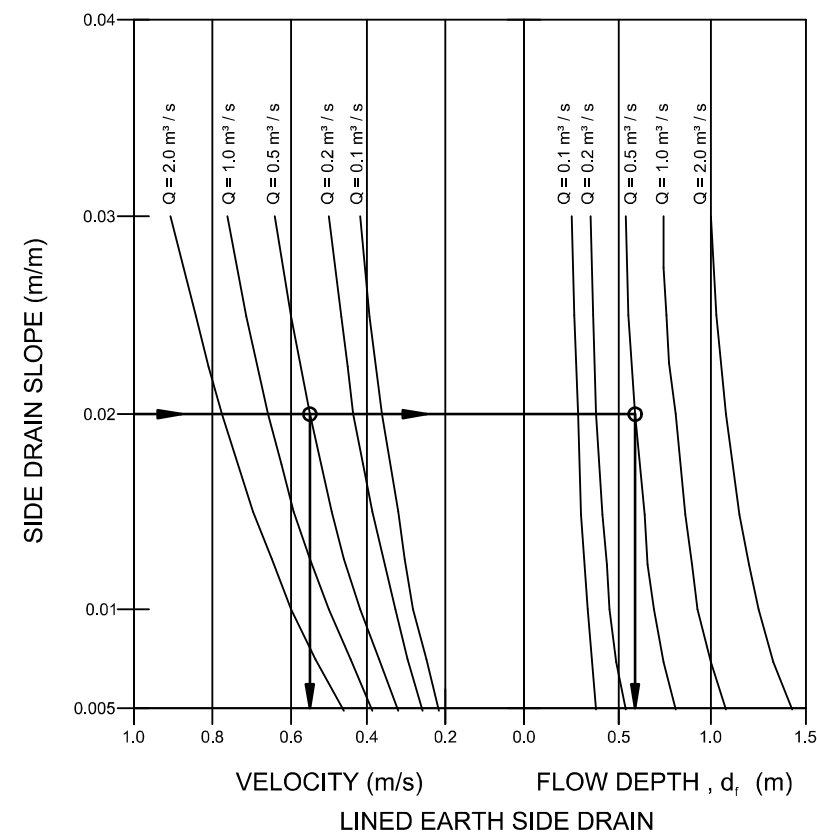
TABLE 1	
BITUMINOUS SURFACING	APPLICATION
CAPE SEAL DOUBLE SEAL ASPHALT	PRIME COAT + 2nd SLURRY PRIME COAT + 7mm STONE PRIME COAT

CONSTANTS USED IN CALCULATIONS	
INVERT WIDTH	= 0.5m
CUT SLOPE	= 1:1.5
MANNING CONSTANT	= 0.22 FOR UNLINED DRAINS = 0.012 FOR CONCRETE LINED DRAINS



LINED EARTH SIDE DRAIN

NOTE :
* DEPTH = $d_f + 0.1m$
WHERE d_f = FLOW DEPTH FROM
LINED EARTH SIDE
DRAIN DIAGRAM



- NOTES :**
- APPLICATION CRITERIA
 - 0.5% < SLOPE < 2.0%
 - IF REQUIRED BY THE ENGINEER
 - USE THE UNLINED EARTH SIDE DRAIN DIAGRAM TO DETERMINE WHETHER A LINED SIDE DRAIN IS REQUIRED.
 - WHERE THIS DEPTH CANNOT BE ACHIEVED, SHALLOWER DEPTH MAY BE PERMITTED SUBJECT TO APPROVAL BY THE ENGINEER. IN SUCH CASES THE ENGINEER MUST DETERMINE WHETHER A SUBSOIL DRAIN IS REQUIRED.
 - UNLESS OTHERWISE INDICATED IN THE PROJECT SPECIFICATION.



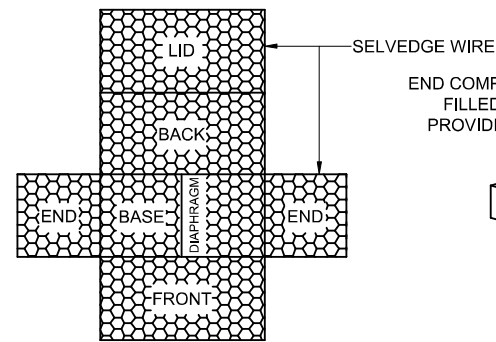


FIGURE 1

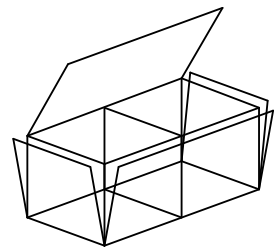


FIGURE 2

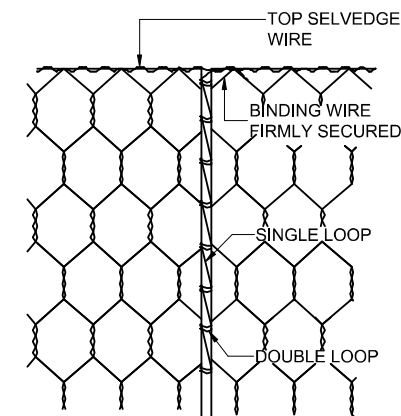


FIGURE 3

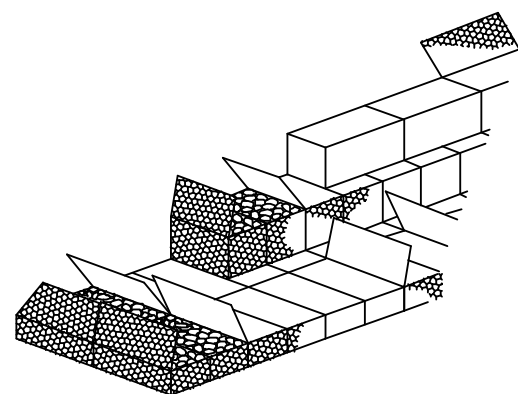


FIGURE 4

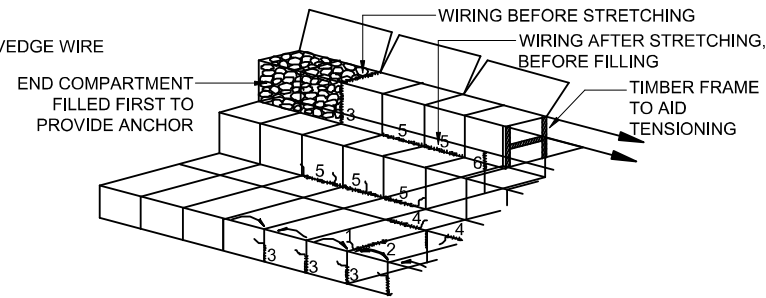


FIGURE 5

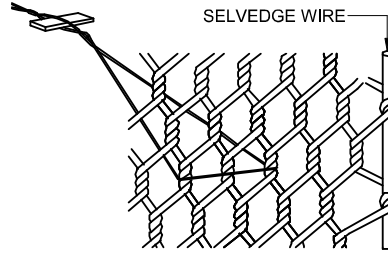


FIGURE 9

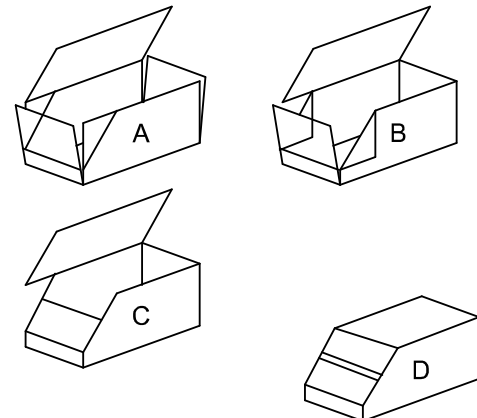


FIGURE 6

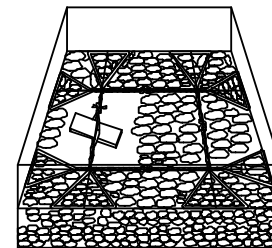


FIGURE 10

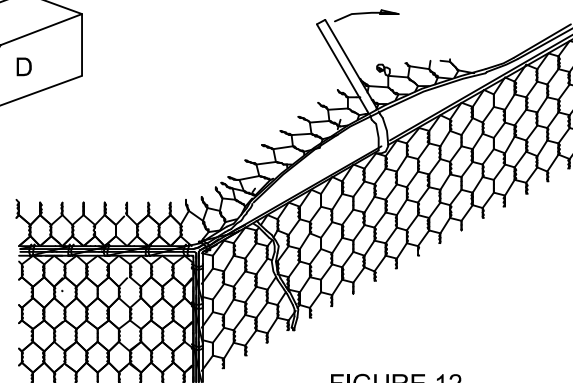


FIGURE 12

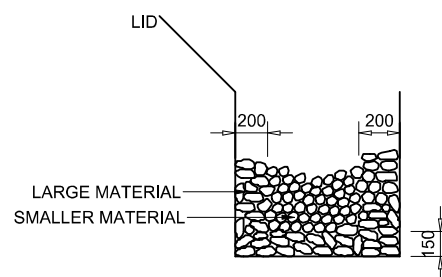


FIGURE 7

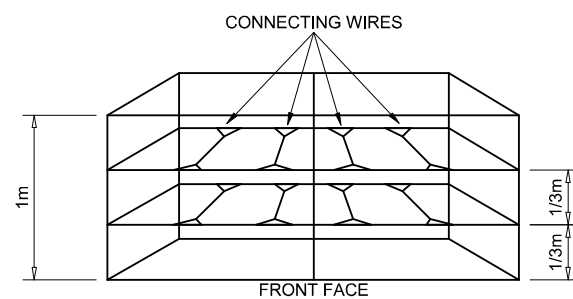


FIGURE 8

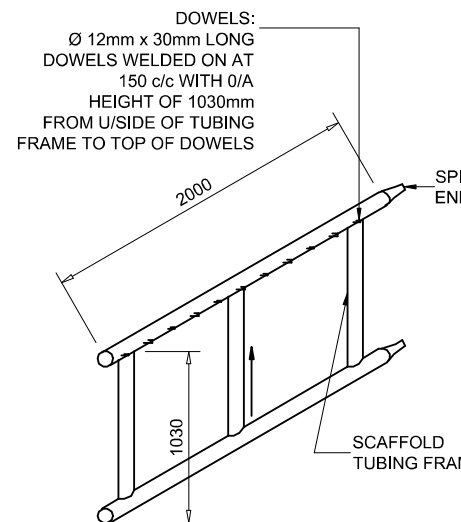


FIGURE 11

ASSEMBLY :

1. UNFOLD EACH GABION ON A HARD FLAT SURFACE. STRETCH IT OUT AND STAMP OUT ANY KINKS. MAKE SURE THAT ALL CREASES ARE IN THE CORRECT POSITIONS FOR FORMING THE BOX - ONE AT THE EDGE OF EACH PANEL AND EACH DIAPHRAGM (FIGURE 1).
2. FOLD THE SIDE AND END PANELS INTO THE UPRIGHT POSITION TO FORM A RECTANGULAR BOX. JOIN THE TOP CORNERS OF THE BOX TOGETHER WITH THE THICK SELVEDGE WIRE STICKING OUT FROM THE CORNERS OF EACH PANEL. THIS ENSURES THAT THE TOPS OF ALL FOUR SIDES OF THE BOX ARE LEVEL (FIGURE 2).
3. SECURING THE BINDING WIRE AROUND THE TOP SELVEDGES OF THE PANELS TO BE JOINED TOGETHER, LACE THE WIRE AROUND THE TWO EDGE SELVEDGES WITH SINGLE LOOPS IN TURN AT 100mm INTERVALS (FIGURE 3). FINALLY, FASTEN THE WIRE SECURELY AT THE BOTTOM CORNER SELVEDGES AND POKE THE LOOSE END INSIDE THE GABION BOX. THEN LIFT THE DIAPHRAGMS INTO THE VERTICAL POSITION AND WIRE THEM UP TO THE SIDE PANELS IN EXACTLY THE SAME WAY. THE TIGHTNESS OF THE MESH AND WIRING IS ESSENTIAL AT ALL TIMES.
4. IT IS GOOD CONSTRUCTION PRACTICE TO LACE SMALL GROUPS OF GABION BOXES TOGETHER AS COMPLETE SECTIONS BEFORE JOINING THEM TO THE REST OF THE STRUCTURE, USING EXACTLY THE SAME METHOD AS FOR ASSEMBLING SINGLE BOXES. PLACE THEM FRONT TO FRONT AND BACK TO BACK, SO THAT PAIRS OF FACING LIDS CAN LATER BE WIRED DOWN SIMULTANEDUSLY (FIGURE 4).

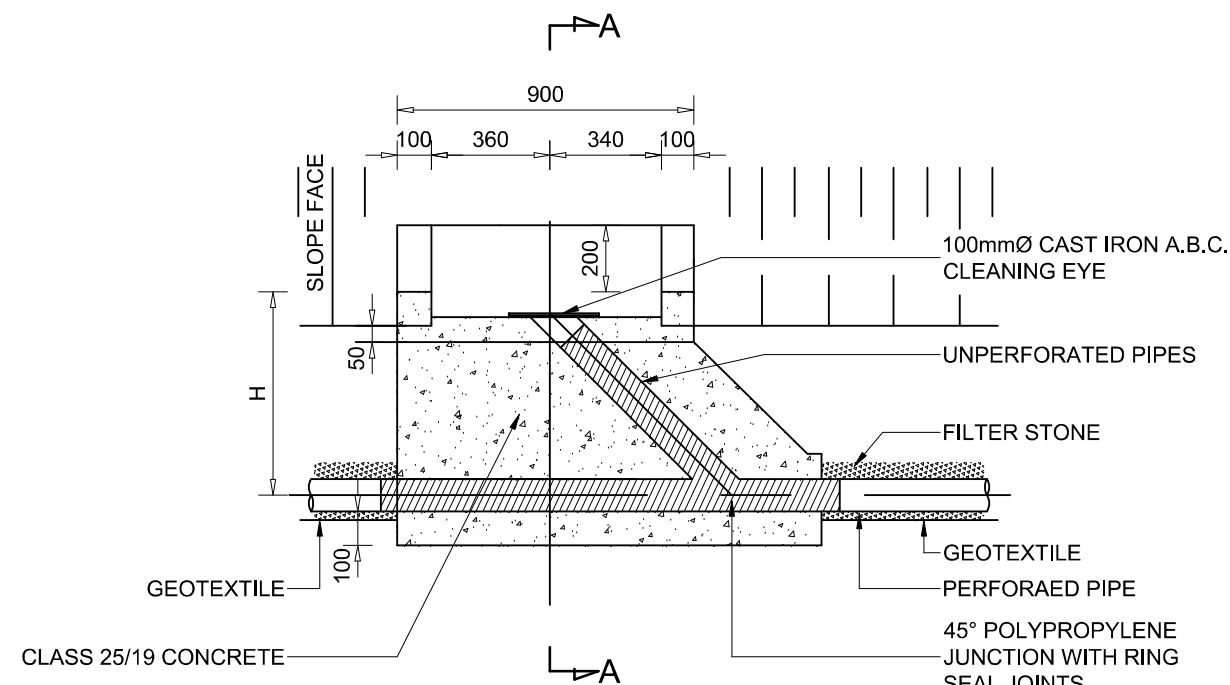
FORMING THE STRUCTURE :

1. THE SURFACE ON WHICH THE GABION BOXES ARE TO BE CONSTRUCTED, SHALL BE LEVELLED TO THE SPECIFIED DEPTH SO AS TO PRESENT AN EVEN SURFACE. CAVITIES BETWEEN HARD PROTRUSIONS SHALL BE FILLED WITH MATERIAL SIMILAR TO THAT BEING USED FOR FILLING THE GABIONS.
2. ONLY ASSEMBLED BOXES, OR GROUPS OF BOXES, SHALL BE POSITIONED IN THE STRUCTURE. THE SIDE OR END, FROM WHICH WORK IS TO PROCEED, SHALL BE SECURELY LACED TO COMPLETED WORK AT ALL DIAPHRAGM POINTS (FIGURE 5), OR ANCHORED BY RODS DRIVEN INTO THE GROUND AT THESE POSITIONS. THE RODS MUST BE SECURED AND REACH AT LEAST TO THE TOP OF THE GABION BOX.
3. STRECH THE OPPOSITE SIDE OF THE BOX OR SECTION BY INSERTING BARS INTO THE BOTTOM CORNERS AND LEVERING THEM FORWARDS BY MEANS OF A WIRE STRAINER OR WINCH. THE TOP AND BOTTOM ARE THEN KEPT STRETCHED IN THIS WAY UNTIL THE GABION HAS BEEN FILLED. WHILE THE GABION IS BEING STRETCHED, ENSURE THAT THE OPPOSITE WIRING OR ANCHORING HAS BEEN PROPERLY CARRIED OUT AND IS NOT PULLING APART OR COLLAPSING (FIGURE 5). THE NEXT STEP IS TO WIRE ALL THE OTHER SIDES AND ENDS OF THE STRETCHED SECTION TO ADJOINING ALREADY FILLED GABIONS (FIGURE 5). THE STRONG INTER-CONNECTION OF ALL UNITS IN A GABION STRUCTURE IS AN IMPORTANT FEATURE OF THE TECHNIQUE AND IT IS THEREFORE ESSENTIAL THAT THE WIRING IS SECURE.
4. WHERE GABION STRUCTURES WITH NON-RECTANGULAR SHAPES ARE SPECIFIED, MODIFICATIONS TO THE BOXES ARE REQUIRED. GABION BOXES ARE FLEXIBLE ENOUGH TO CONFORM TO BENDS DOWN TO A RADIUS OF 25m WITHOUT WIRING. FIRST WIRE A NUMBER OF BOXES TOGETHER AND BEND THEM UP TO THE CURVE SET OUT PREVIOUSLY, HOLDING THEM IN POSITION DURING FILLING. OTHER SHAPES, BEVELS AND MITRES, SHOULD BE FORMED BY CUTTING AND FOLDING THE PANELS TO THE REQUIRED ANGLES AND SIZES (FIGURE 6).

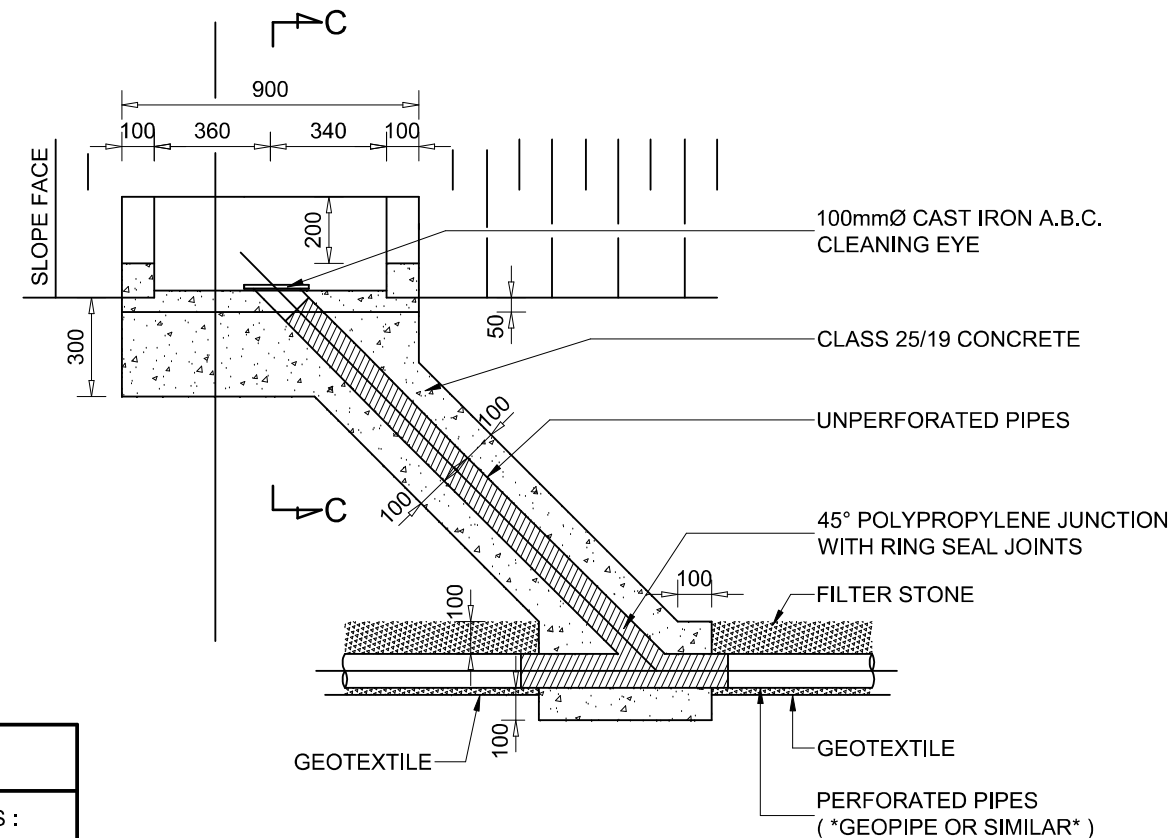
ROCK FILLING :

1. FILLING SHOULD BE CARRIED OUT ONLY WHILST GABION BOXES ARE UNDER TENSION.
2. FILLING MATERIAL SHOULD BE HARD DURABLE STONE NOT LARGER THAN 250mm AND NOT SMALLER THAN THE SIZE OF THE MASH. IDEALLY THE STONE SHOULD BE JUST SLIGHTLY LARGER THAN THE MESH SIZE IN ORDER TO ALLOW FLEXIBILITY IN THE STRUCTURE BUT AT THE SAME TIME FILLS THE GABION COMPARTMENTS WITH THE MINIMUM OF VOIDS AND THE MAXIMUM MASS.
3. IN AREAS WHERE LARGE ENOUGH FILL IS DIFFICULT TO OBTAIN, THE COMPARTMENT IS LINED WITH LARGE MATERIAL AND THE INTERIOR FILLED WITH SMALLER. THE SMALL MATERIAL CAN BE 5% TO 7% OF THE FILL (FIGURE 7). CARE SHALL BE TAKEN IN PACKING THE VISIBLE FACES OF GABION BOXES WHERE ONLY SELECTED STONE OF THE SPECIFIED SIZE SHALL BE USED SO AS TO OBTAIN AN EVEN FACED FINISH.
4. TO AVOID BULGING ON THE VISIBLE SIDE OF THE STRUCTURE, FILL ALL THE OUTSIDE BOXES IN STAGES (1.0m HIGH BOXES IN THREE LEVELS AND 0.5m HIGH BOXES IN TWO LEVELS) WITH HORIZONTAL BRACING IN BETWEEN (FIGURE 8). FIX THE BRACING WIRES IN THE GABION BOX DIRECTLY ABOVE THE STONE LEVEL MAKING SURE THE WIRE PASSES ROUND AT LEAST TWO MESH WIDTHS AND "SPANISH" WINDLASS THE BRACING WIRES TO KEEP THE FACE EVEN AND FREE FROM BULGING (FIGURE 9). BRACING IN BOTH DIRECTIONS SHOULD BE USED IN GABIONS AT CORNERS OF STRUCTURES (FIGURE 10). AS AN ADDITIONAL MEASURE, SCAFFOLD PLANKING AS SHUTTERING ALONG THE FRONT FACE OR A PRE-FABRICATED SCAFFOLD TUBING FRAME SYSTEM CAN BE USED (FIGURE 11).
5. LEVEL OFF THE FILL 25mm to 50mm ABOVE THE TOP OF THE MESH TO ALLOW FOR SETTLEMENT. SMALL MATERIAL IS BEST FOR THIS.
6. STRETCH THE LIDS TIGHTLY OVER THE FILLING USING A CROWBAR. SECURE THE CORNERS FIRST, BY MEANS OF THE THICK SELVEDGE WIRE PROTRUDING FROM THE LID CORNERS. TO ENSURE THAT THERE IS ENOUGH MESH TO COVER THE WHOLE AREA. SOME FILLING MAY HAVE TO BE REMOVED FROM THE TOP OF THE GABION BOX TO PREVENT THE LID FROM OVERSTRAINING, THEN SECURELY WIRE IT TO THE TOPS OF THE SIDES, ENDS AND DIAPHRAGMS, USING THE ALTERNATE SINGLE AND DOUBLE LOOPS (FIGURE 12).





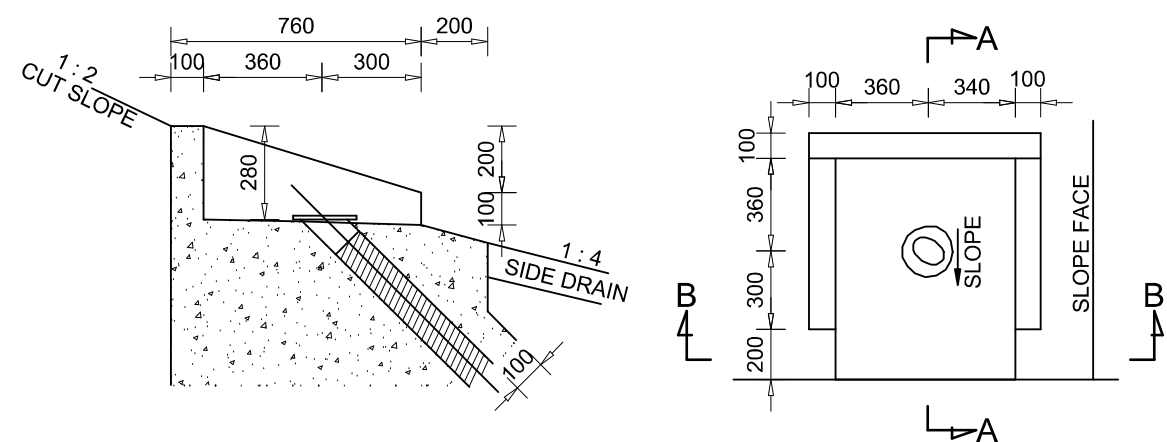
SECTION B - B



SECTION D - D

NOTES

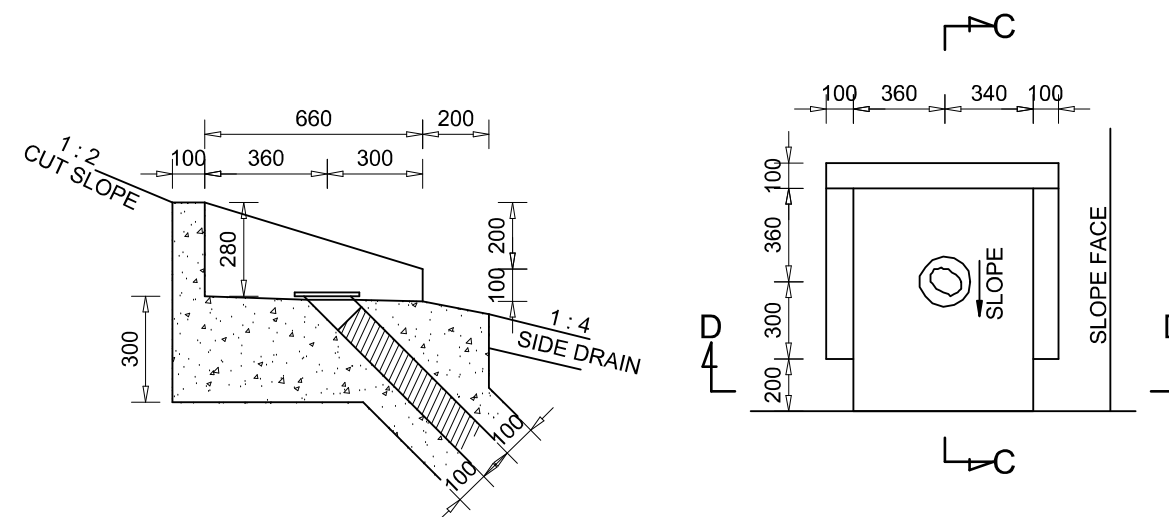
1. POSITION OF CLEANING EYES :
 - (a) WHERE NO HAZARD IS CAUSED TO TRAFFIC OR MAINTENANCE IN THE ROAD RESERVE
 - (b) CLEARLY VISIBLE
2. MAXIMUM SPACING : 100m



SECTION A - A

PART PLAN

CLEANING EYE TYPE 1 ($H \leq 1000$)

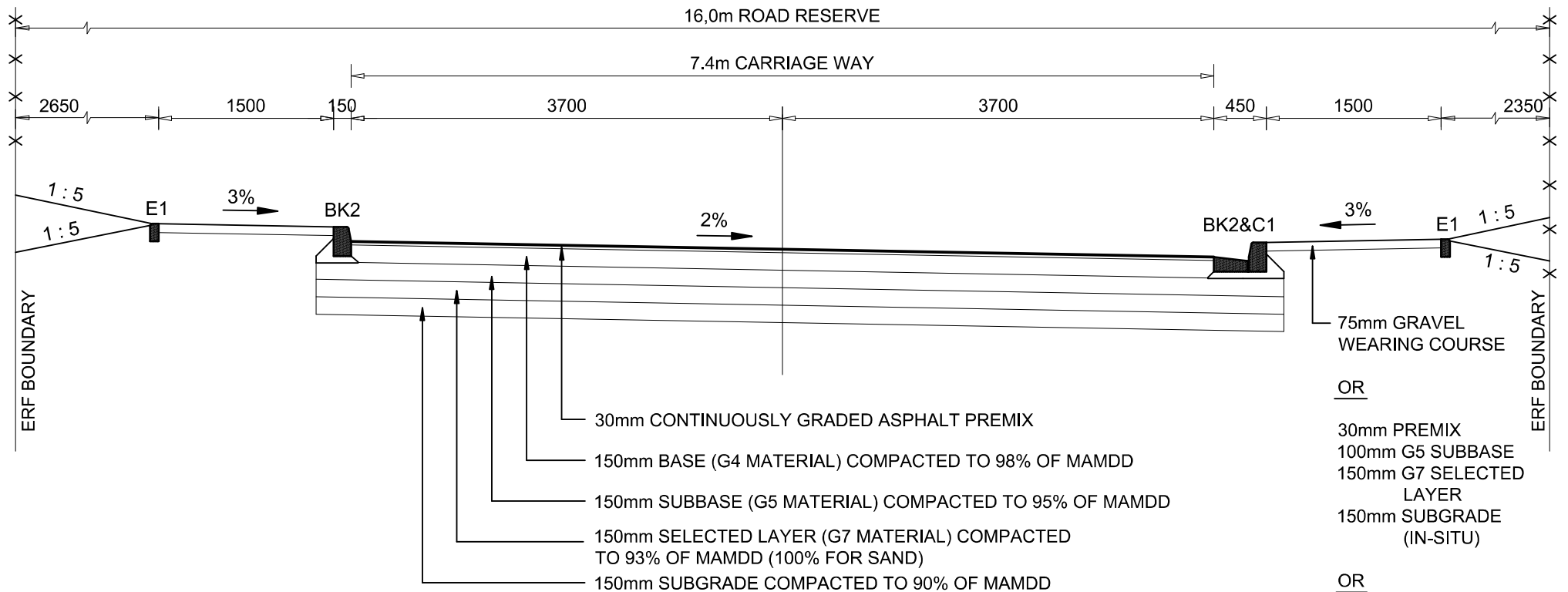


SECTION C - C

PART PLAN

CLEANING EYE TYPE 2 ($H > 1000$)





NOTE:

MAMDD: MODIFIED AASHTO MAXIMUM DRY DENSITY



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STANDARD DETAIL DRAWING

TYPICAL CROSS SECTION OF ROAD

Scale

1 : 50

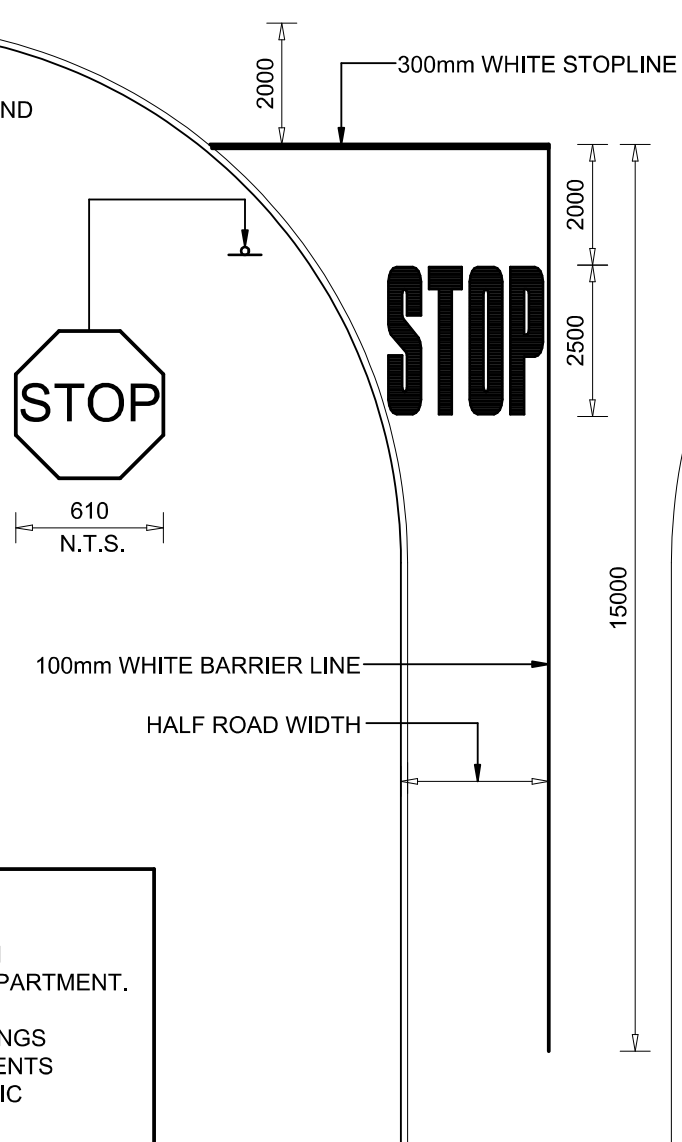
Paper Size

A4

Drawing No.

SR1

NOTE: MINIMUM HEIGHT FROM FINAL GROUND
LEVEL TO TOP OF SIGN = 2200mm



NOTES:

1. TRAFFIC SIGNS SHALL BE ERECTED IN CONJUNCTION WITH THE TRAFFIC DEPARTMENT.
2. ALL TRAFFIC SIGNS AND ROAD MARKINGS SHALL COMPLY WITH THE REQUIREMENTS OF THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL.



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STANDARD DETAIL DRAWING

TYPICAL STOP CONTROLLED INTERSECTION

Scale

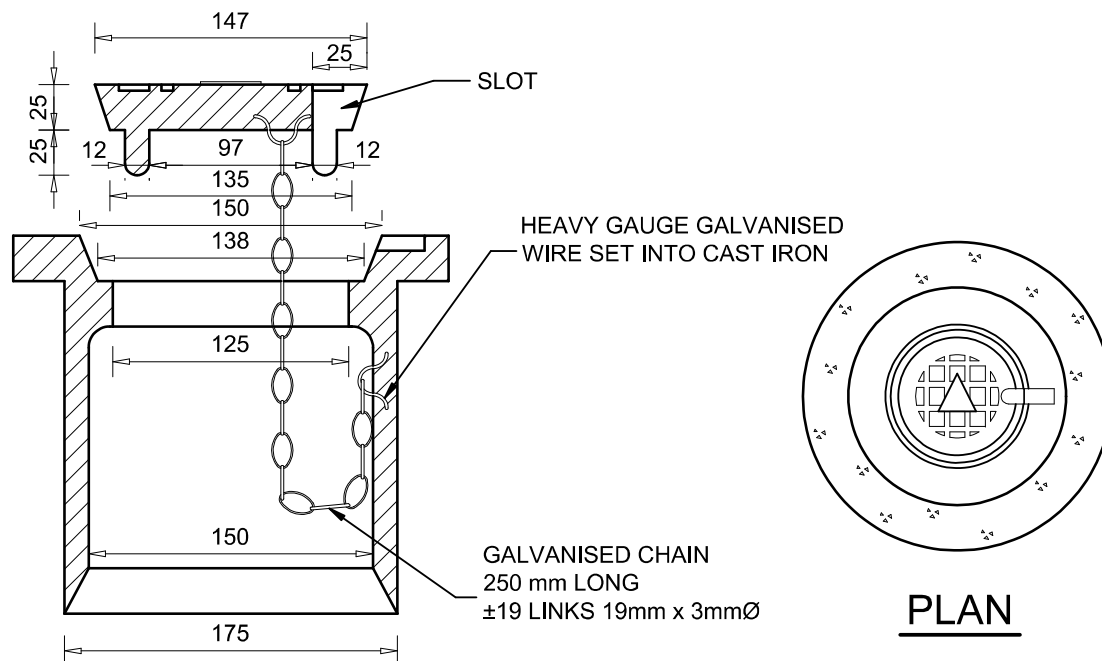
1 : 125

Paper Size

A4

Drawing No.

SR2



1. DIMENSIONS AND TOLERANCES

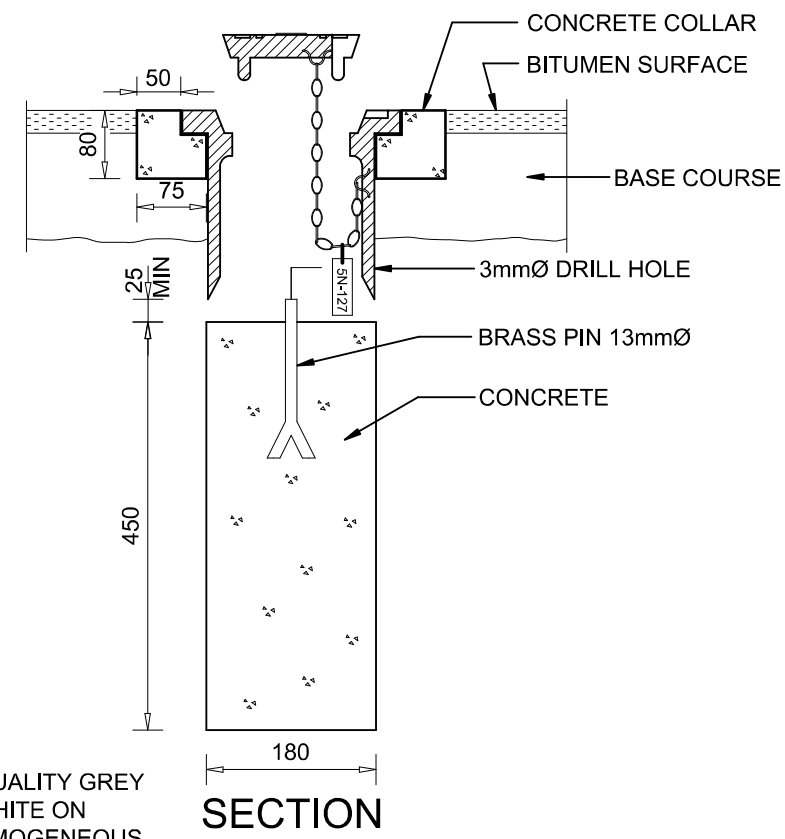
- 1.1 ALL CASTINGS, CHAINS AND CHAIN STAPLES SHALL CONFORM TO THE RELEVANT DIMENSIONAL REQUIREMENTS GIVEN ON THE PLAN.
- 1.2 COVERS AND FRAMES SHALL BE FREE FROM TWIST, SHALL BE SO FINISHED THAT COVERS REST EVENLY ON INTENDED MUTUAL BEARING SURFACES AND SHALL NOT ROCK. WHEN FITTED TO FRAMES, COVERS SHALL FIT SUFFICIENTLY LOOSELY TO BE RETAINED IN POSITION BY WEIGHT ONLY. THE TOP SURFACES OF COVERS, INCLUDING ANTI-SLIP PROJECTIONS, SHALL NOT PROTRUDE ABOVE, NOR BE MORE THAN 1,5mm BELOW THE TOPS OF ASSOCIATED FRAMES.

2. MATERIAL AND FINISH

- 2.1 CASTINGS SHALL BE MANUFACTURED IN GOOD QUALITY GREY CAST IRON AND NOT OF IRON WHICH APPEARS WHITE ON FRACTURE. ALL CASTINGS SHALL BE SOUND, HOMOGENEOUS AND FREE FROM SAND AND BLOW-HOLES, COLD SHUTS, SCAB AND OTHER DEFECTS.
- 2.2 THE CHEMICAL ANALYSIS OF GREY CAST IRON IS GIVEN IN THE FOLLOWING TABLE:

CARBON	SILICON	SULPHUR	PHOSPHORUS	MANGANESE
%	%	% MAX	% MAX	%
3.5 - 4.0	1.25 - 2.0	0.05	0.02	0.75 - 1.0

- 2.3 CHAINS AND CHAIN STAPLES SHALL BE MILD STEEL.
- 2.4 ALL CONCRETE TO BE OF CLASS 20/19.



1,5mm THICK STAINLESS STEEL/
COPPER PLATE FOR NUMBER WITH
COPPER WIRE

5N - 127

TAG FOR NUMBER



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STANDARD DETAIL DRAWING

TOWN SURVEY MARK

Scale

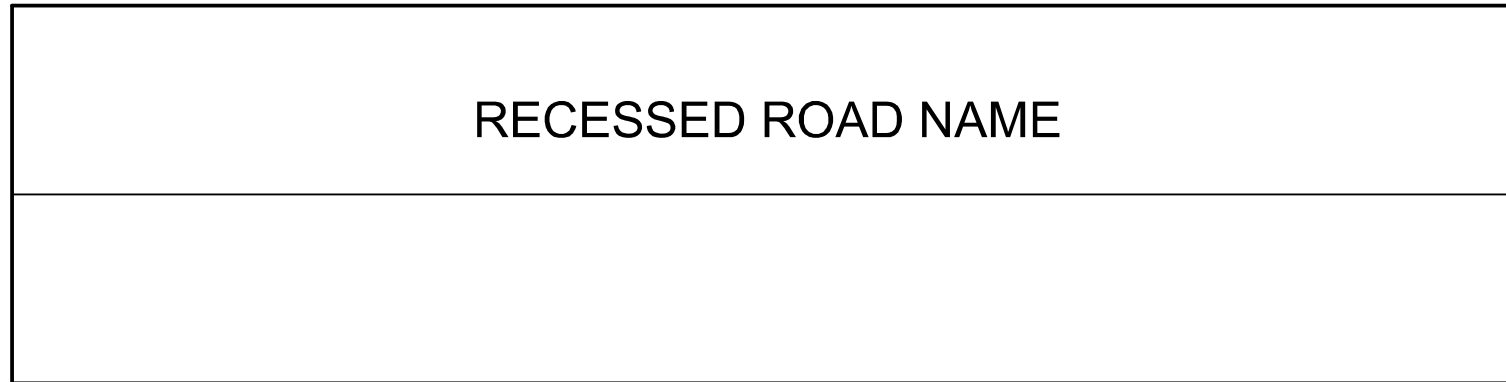
N.T.S.

Paper Size

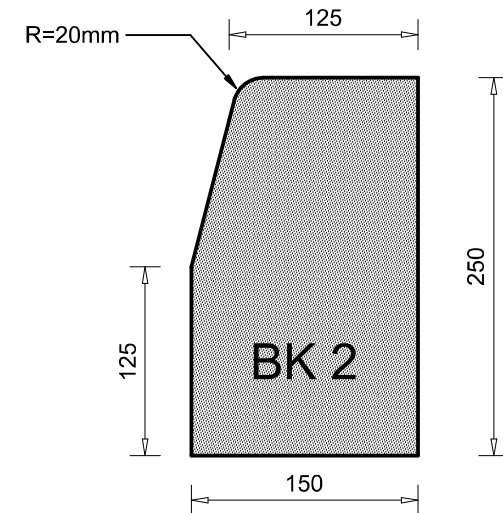
A4

Drawing No.

SR3



FRONT ELEVATION



NOTES:

1. TEXT TYPE DIN A, TEXT HEIGHT 75mm
2. BLACK LETTERING ON YELLOW REFLECTIVE BACKGROUND. USING ROAD MARKING PAINT ACCORDING TO SABS 731 - 1987

SECTION A-A



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STANDARD DETAIL DRAWING

ROAD NAME KERB

(1 OF 2)

Scale

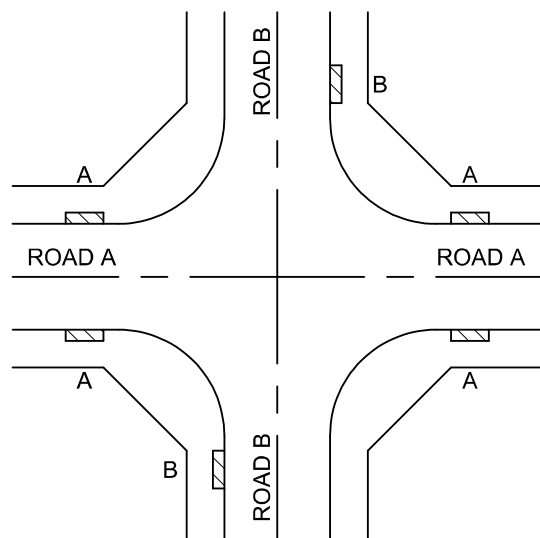
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Paper Size

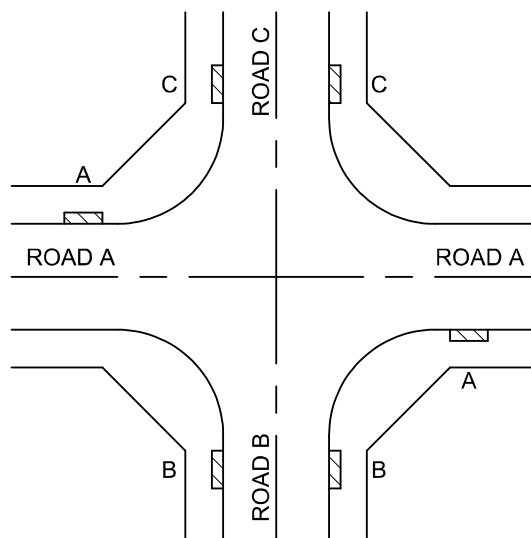
A4

Drawing No.

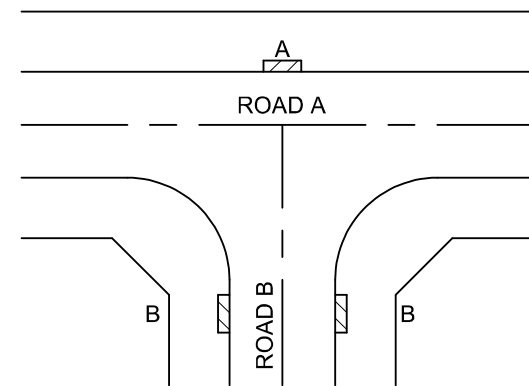
SR4



2 ROAD NAMES



3 ROAD NAMES



ROAD NAMES
OPPOSITE INTERSECTING ROAD

PLAN VIEW SHOWING ROAD NAME KERB POSITIONS

NOTES:

1.  DENOTES THE POSITION OF THE PRECAST ROAD NAME KERB
2. THE LETTER DENOTES THE RELATIVE ROAD NAME TO APPEAR ON THE UNIT
3. RESESSED LETTERS PAINTED BLACK AND THE REMAINDER OF KERB TO HAVE A YELLOW BACKGROUND.



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

ROAD NAME KERB

(2 OF 2)

Scale

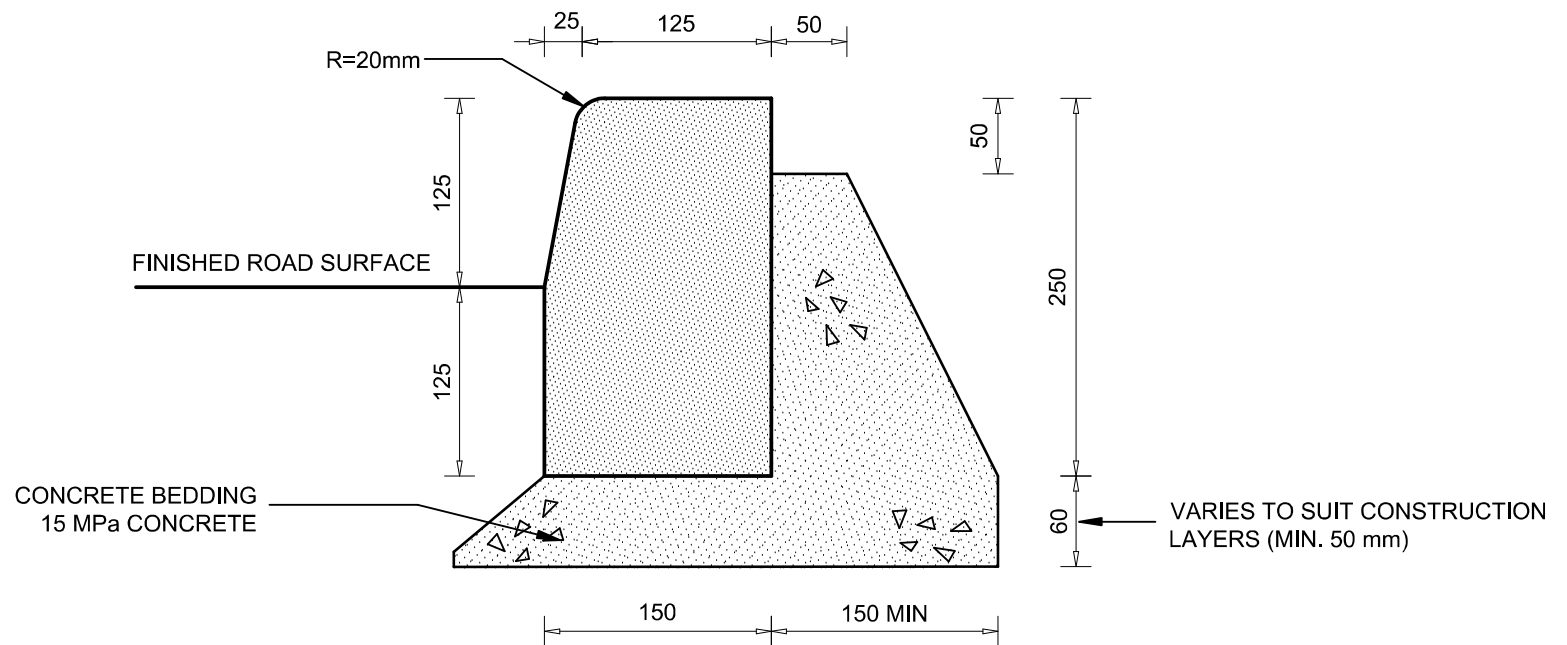
N.T.S.

Paper Size

A4

Drawing No.

SR5



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

BARRIER KERB : TYPE BK2

Scale

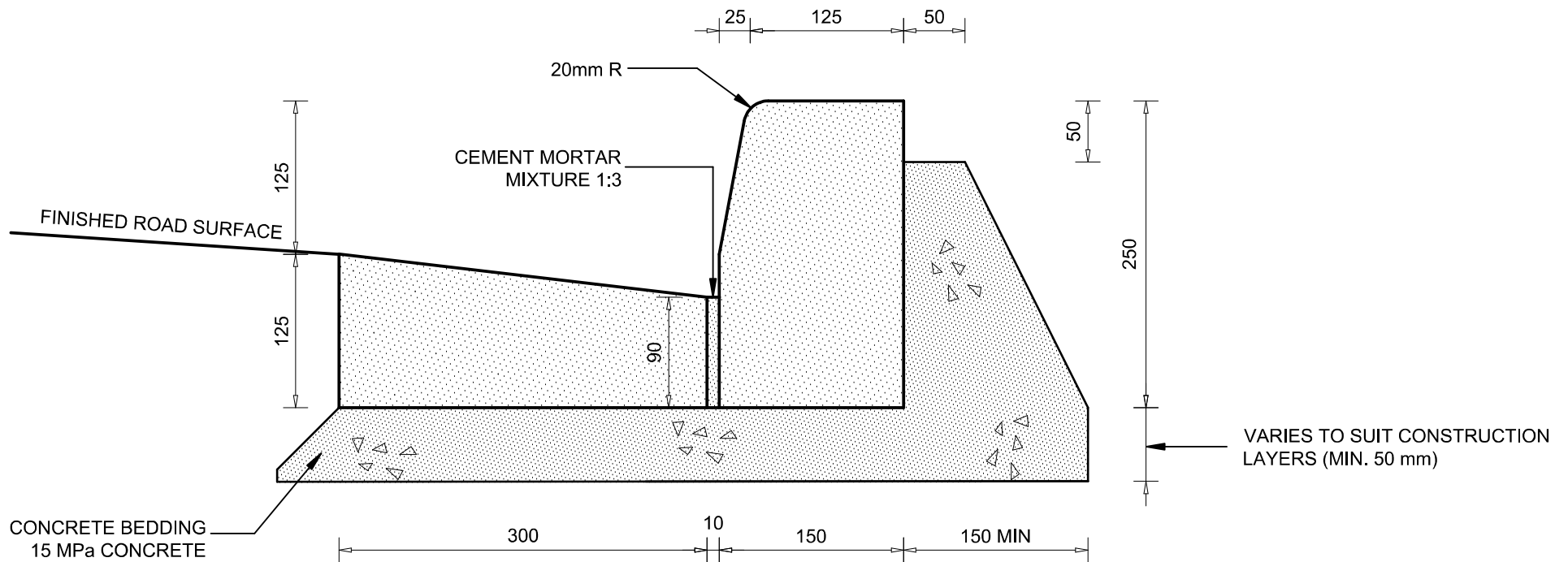
1 : 5

Paper Size

A4

Drawing No.

SR6



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

BARRIER KERB : TYPE BK2 & C1

Scale

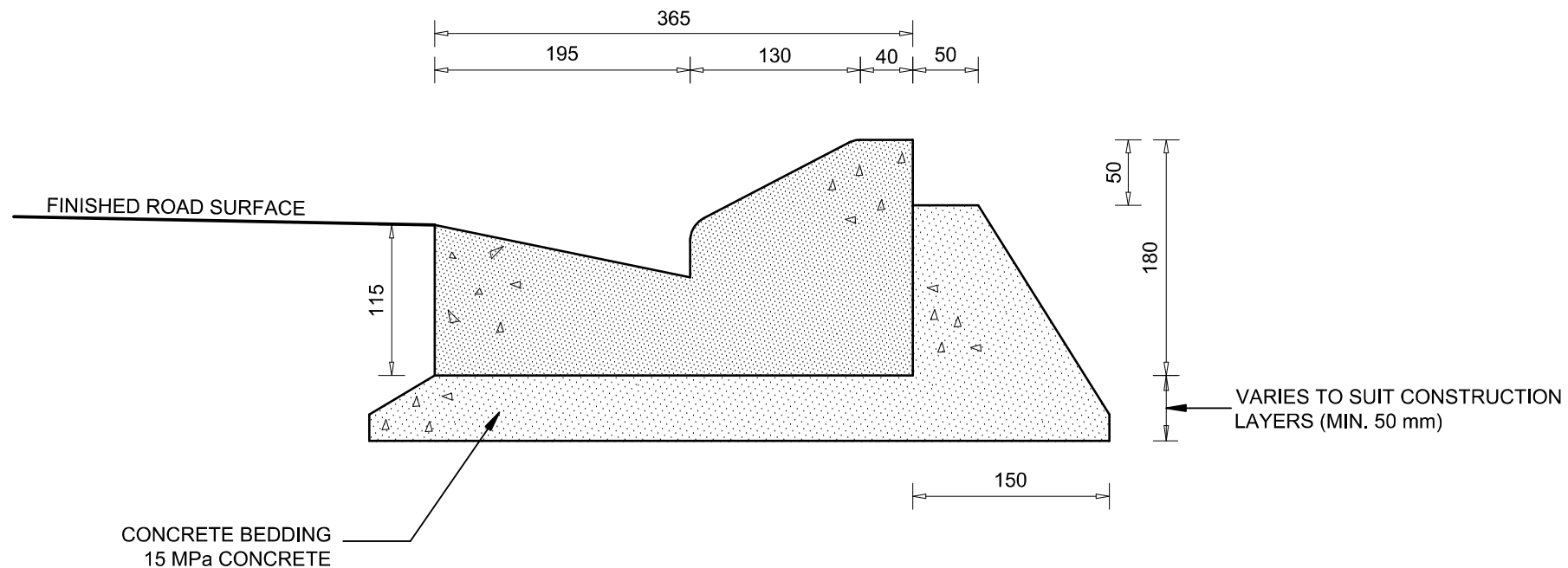
1 : 5

Paper Size

A4

Drawing No.

SR7



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

MOUNTABLE KERB : TYPE CK5

Scale

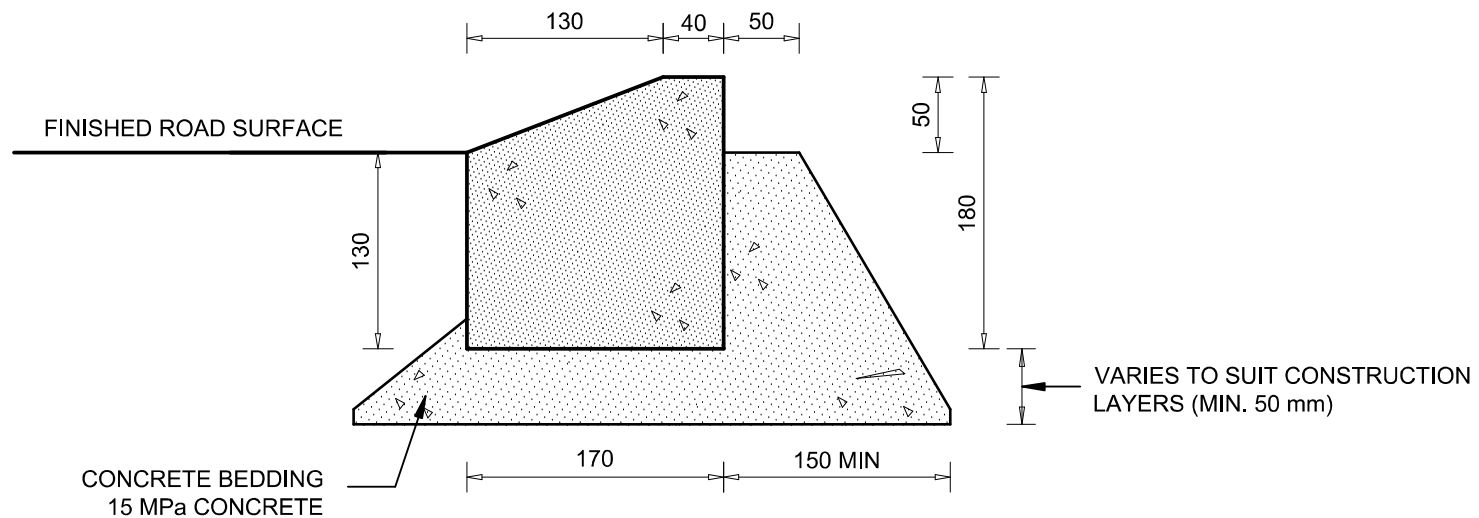
1 : 5

Paper Size

A4

Drawing No.

SR8



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

MOUNTABLE KERB : TYPE MK10

Scale

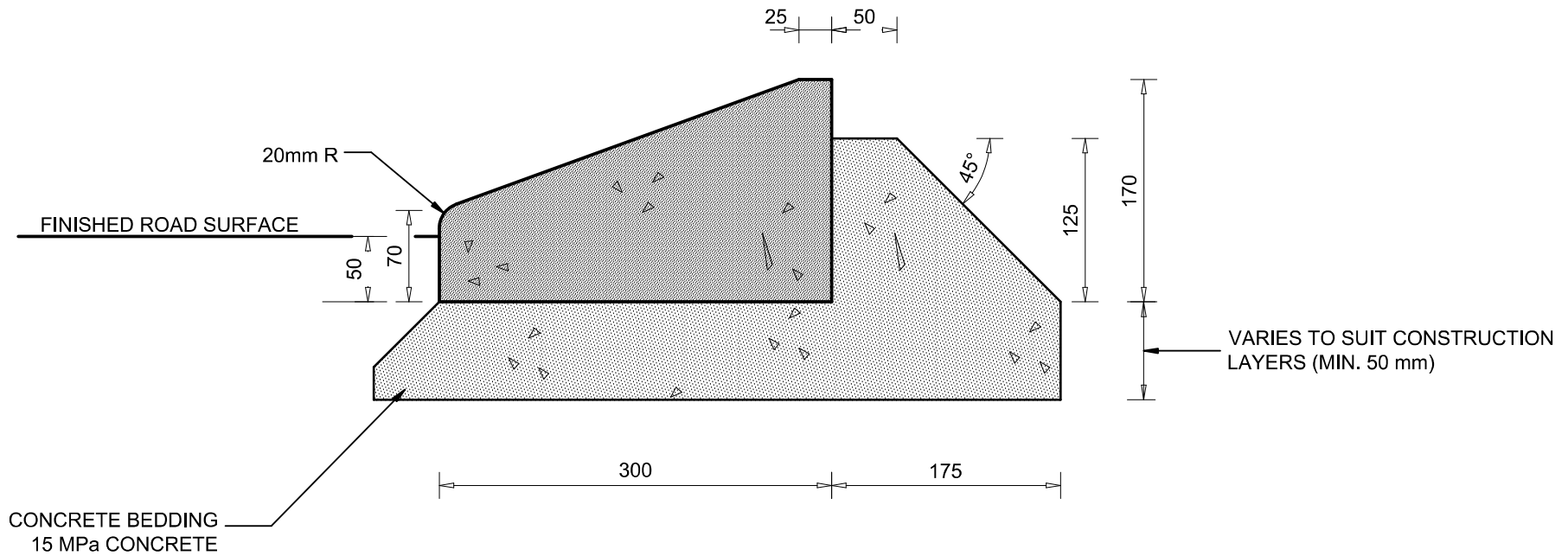
1 : 5

Paper Size

A4

Drawing No.

SR9



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

MOUNTABLE KERB : TYPE MK7

Scale

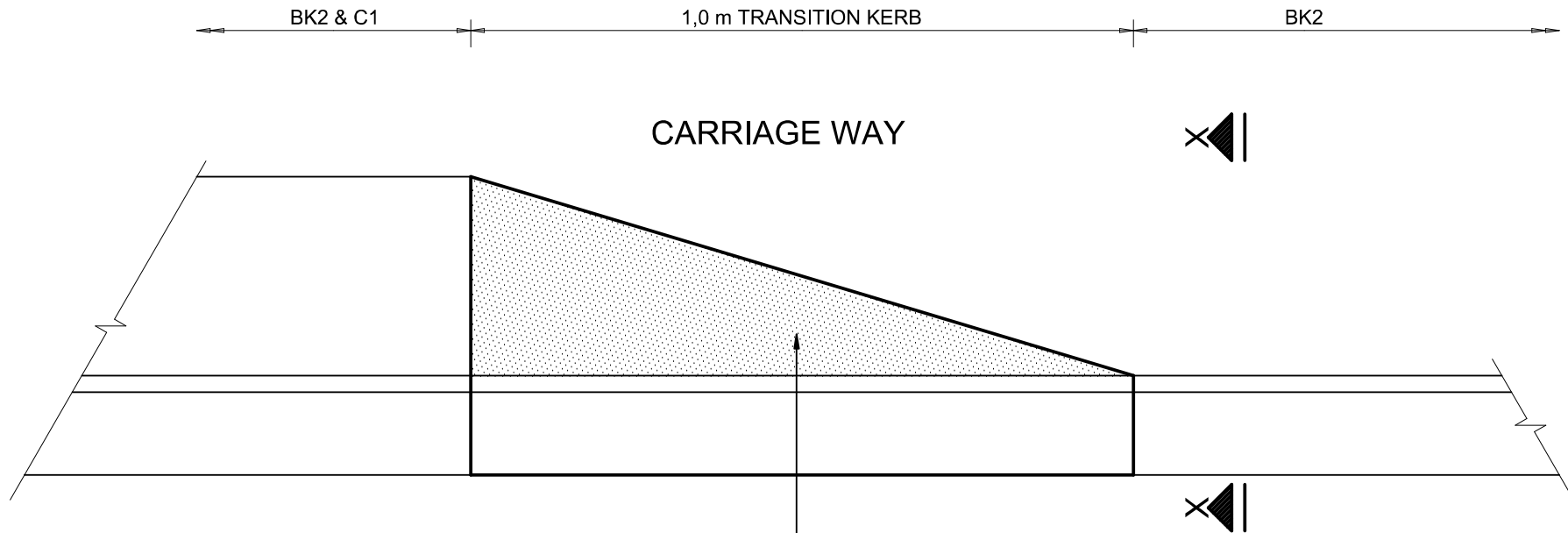
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Paper Size

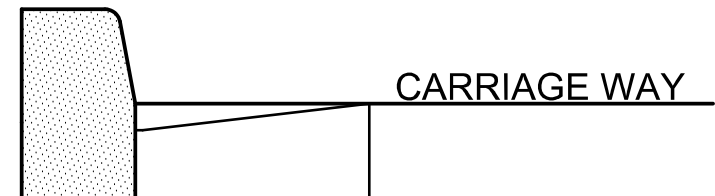
A4

Drawing No.

SR10



TRANSITION KERB SHAPED
FROM 25 MPa CONCRETE
WITH 6mm STONE



SECTION X - X

NOTE:
ALL EXPOSED SURFACES TO HAVE
A STEEL FLOAT FINISH



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STANDARD DETAIL DRAWING

TRANSITION KERB: BK2 & C1 - BK2

Scale

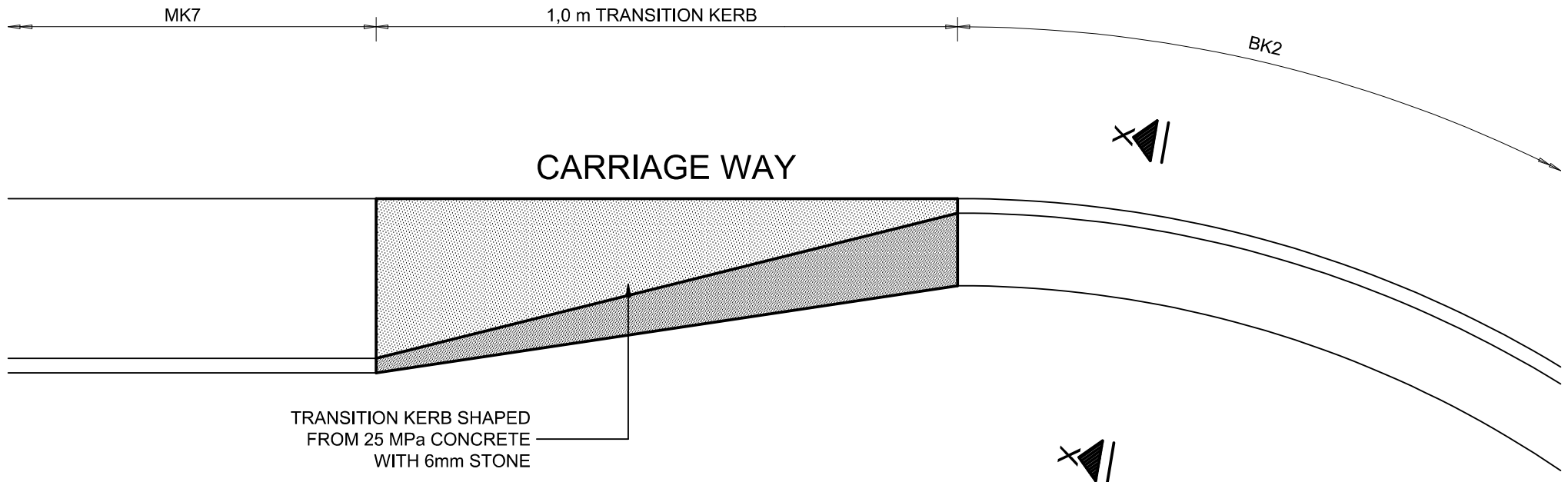
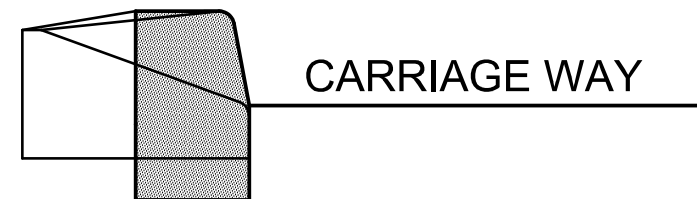
1 : 10

Paper Size

A4

Drawing No.

SR11



SECTION X - X

NOTE:

ALL EXPOSED SURFACES TO HAVE
A STEEL FLOAT FINISH



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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

TRANSITION KERB : MK7 - BK2

Scale

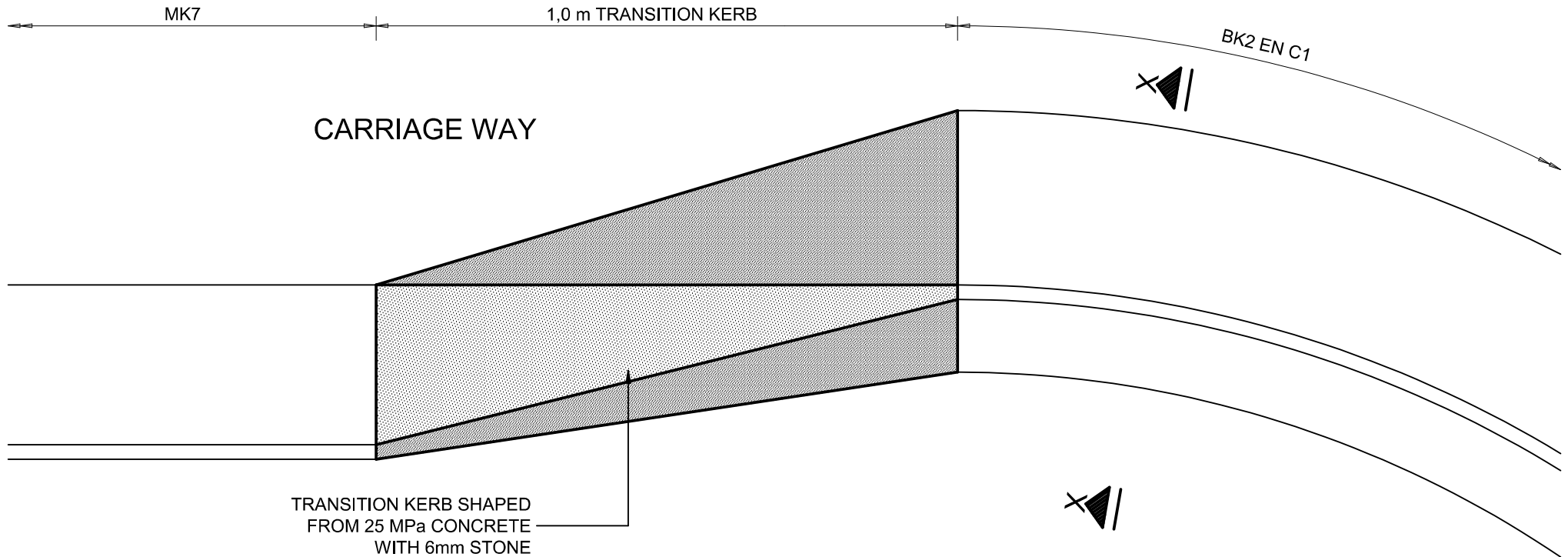
1 : 10

Paper Size

A4

Drawing No.

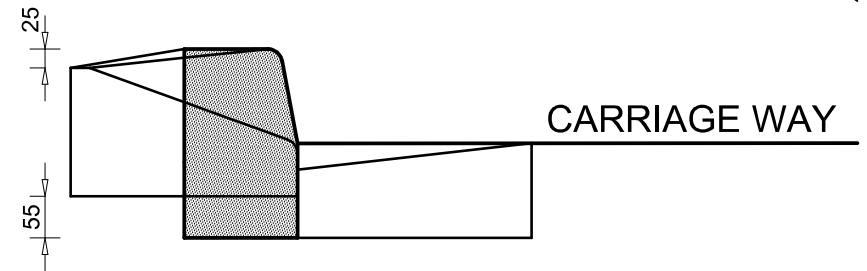
SR12



TRANSITION KERB SHAPED
FROM 25 MPa CONCRETE
WITH 6mm STONE

NOTE:

ALL EXPOSED SURFACES TO HAVE
A STEEL FLOAT FINISH



SECTION X - X



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

TRANSITION KERB : MK7 - BK2 & C1

Scale

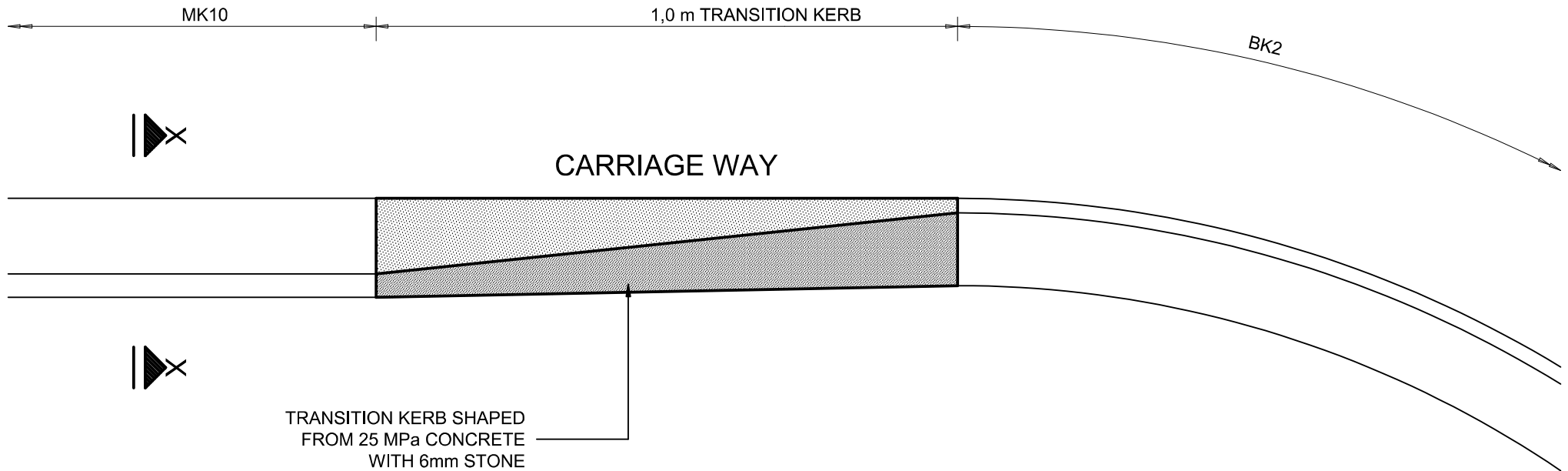
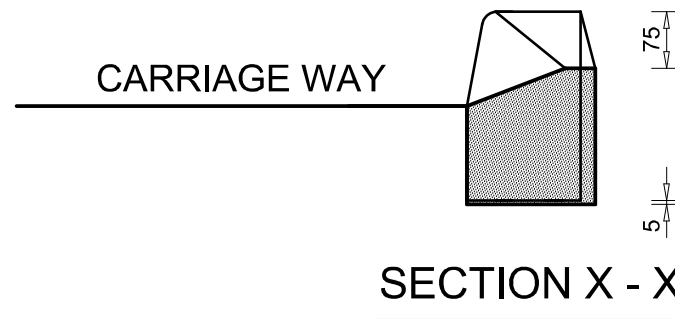
1 : 10

Paper Size

A4

Drawing No.

SR13



NOTE:

ALL EXPOSED SURFACES TO HAVE
A STEEL FLOAT FINISH



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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

TRANSITION KERB : MK10 - BK2

Scale

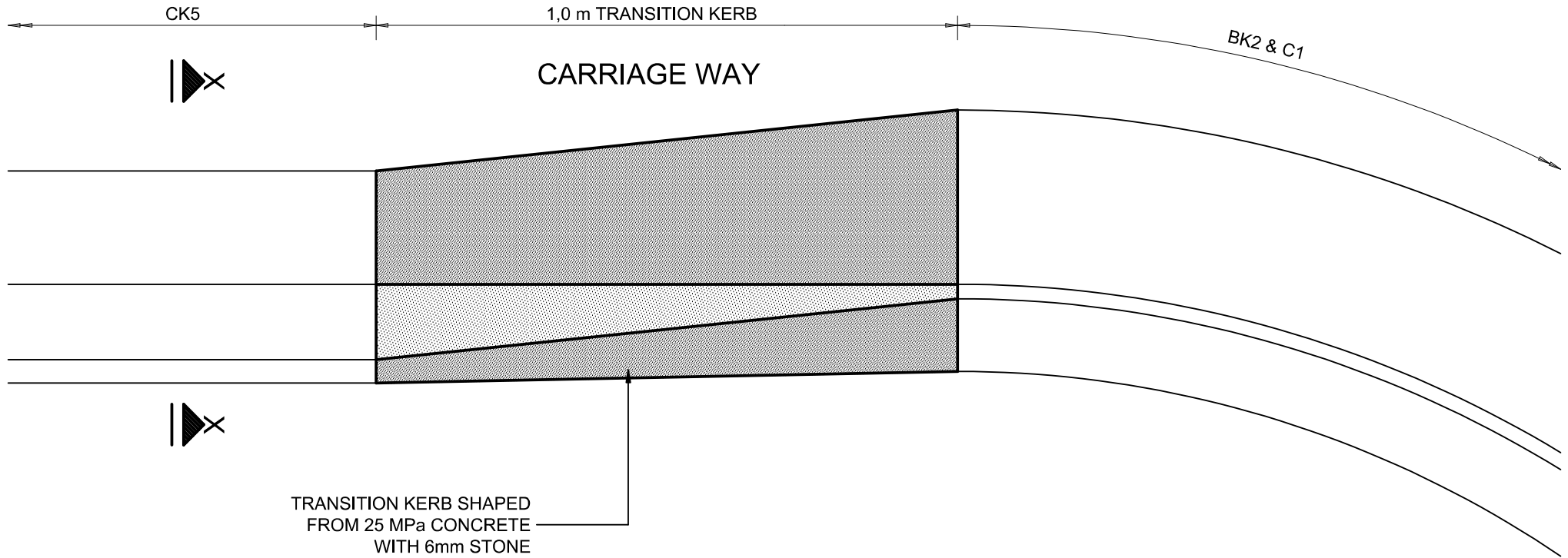
1 : 10

Paper Size

A4

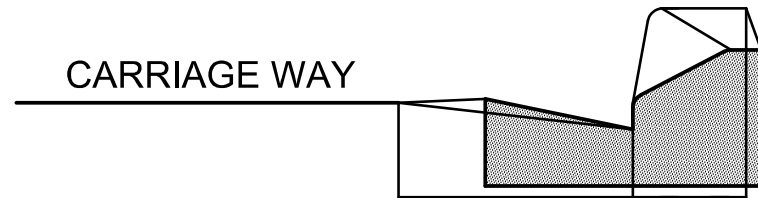
Drawing No.

SR14



NOTE:

ALL EXPOSED SURFACES TO HAVE A STEEL FLOAT FINISH



SECTION X - X



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

TRANSITION KERB : CK5 - BK2 & C1

Scale

1 : 10

Paper Size

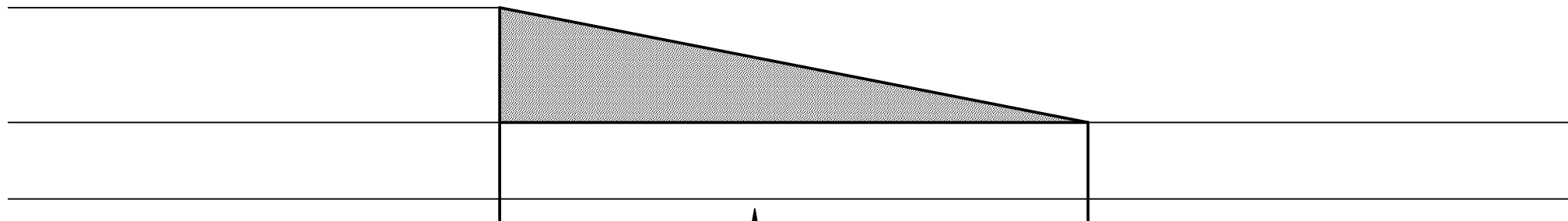
A4

Drawing No.

SR15

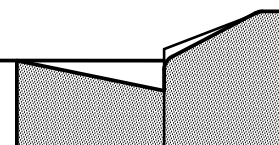


CARRIAGE WAY



TRANSITION KERB SHAPED
FROM 25 MPa CONCRETE
WITH 6mm STONE

CARRIAGE WAY



SECTION X - X

NOTE:

ALL EXPOSED SURFACES TO HAVE
A STEEL FLOAT FINISH



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STANDARD DETAIL DRAWING

TRANSITION KERB : CK5 - MK10

Scale

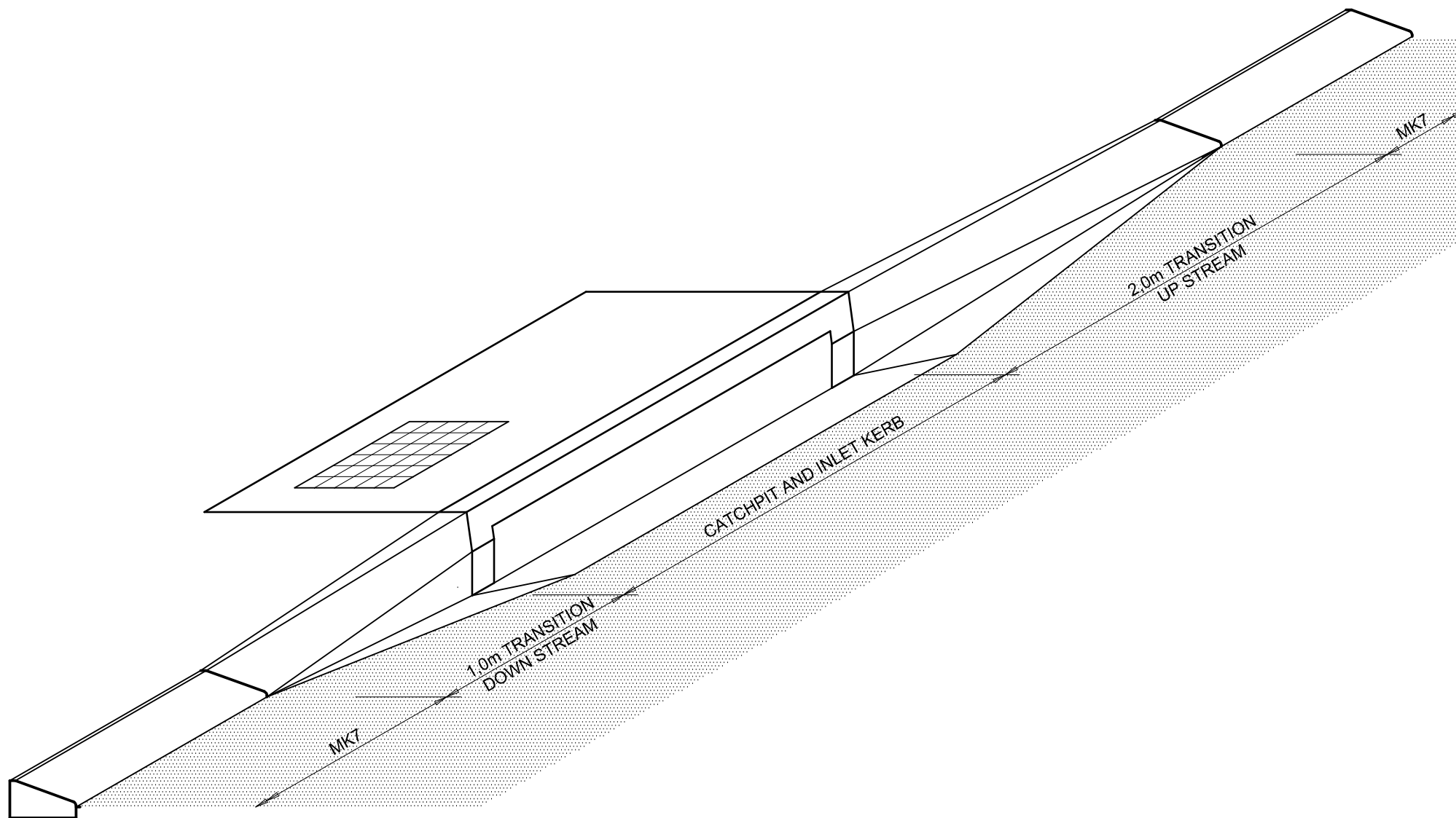
1 : 10

Paper Size

A4

Drawing No.

SR16



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

MK7 KERBS WITH TYPE B CATCHPIT
- ISOMETRIC VIEW -

Scale

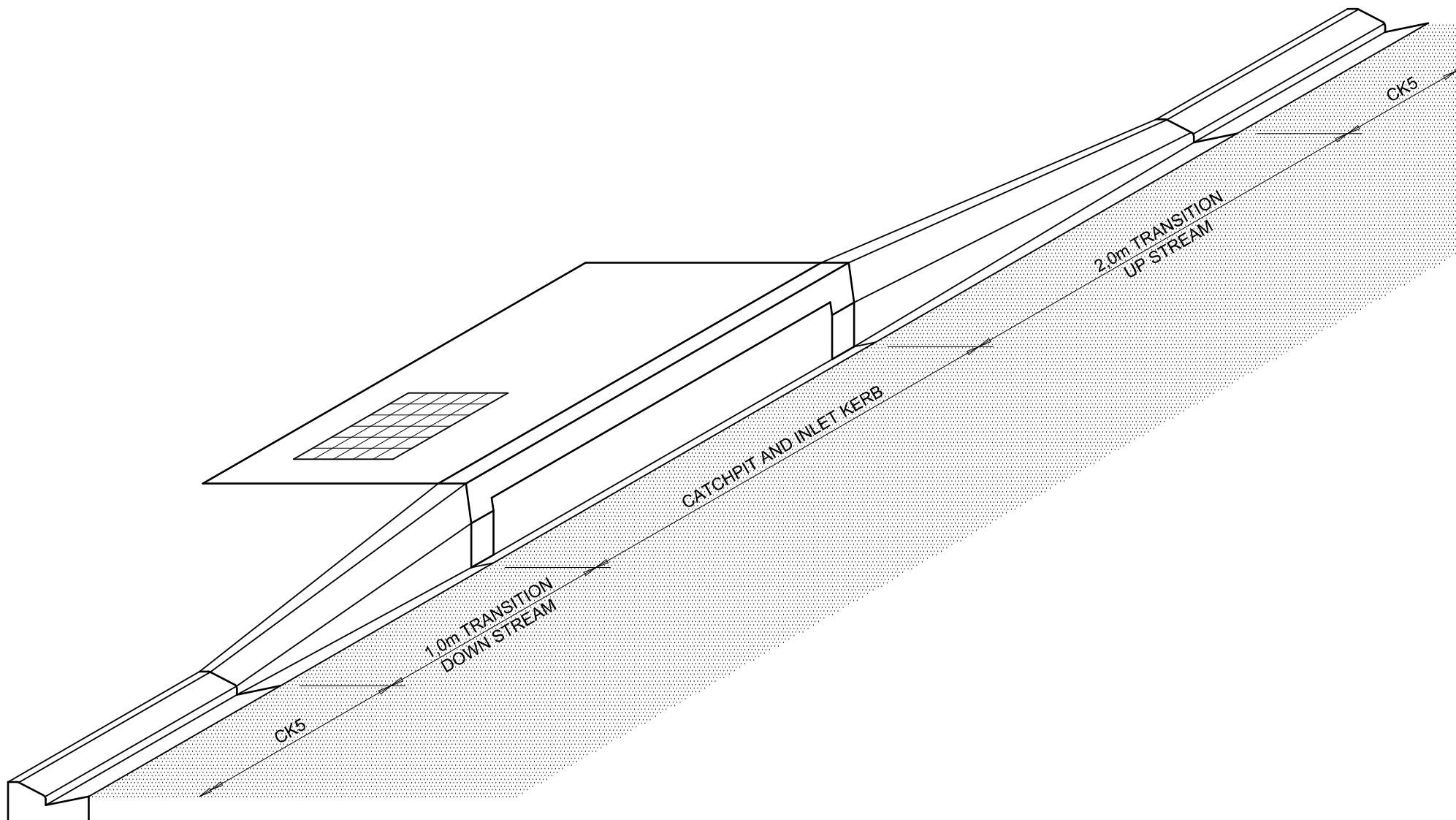
1 : 10

Paper Size

A4

Drawing No.

SR17



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

CK5 KERBS WITH TYPE B CATCHPIT
- ISOMETRIC VIEW -

Scale

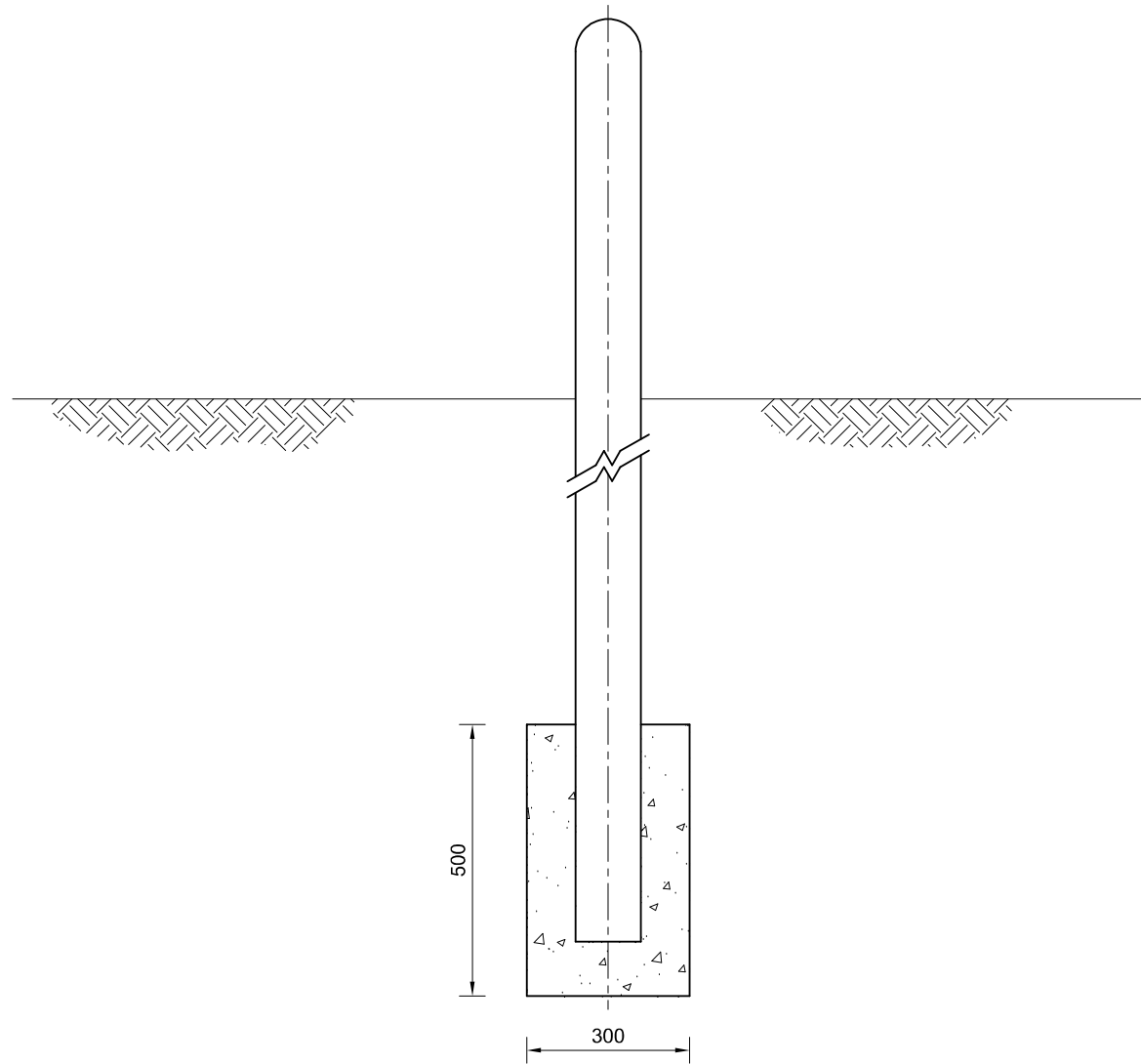
1 : 10

Paper Size

A4

Drawing No.

SR18



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

TIMBER BOLLARD

Scale

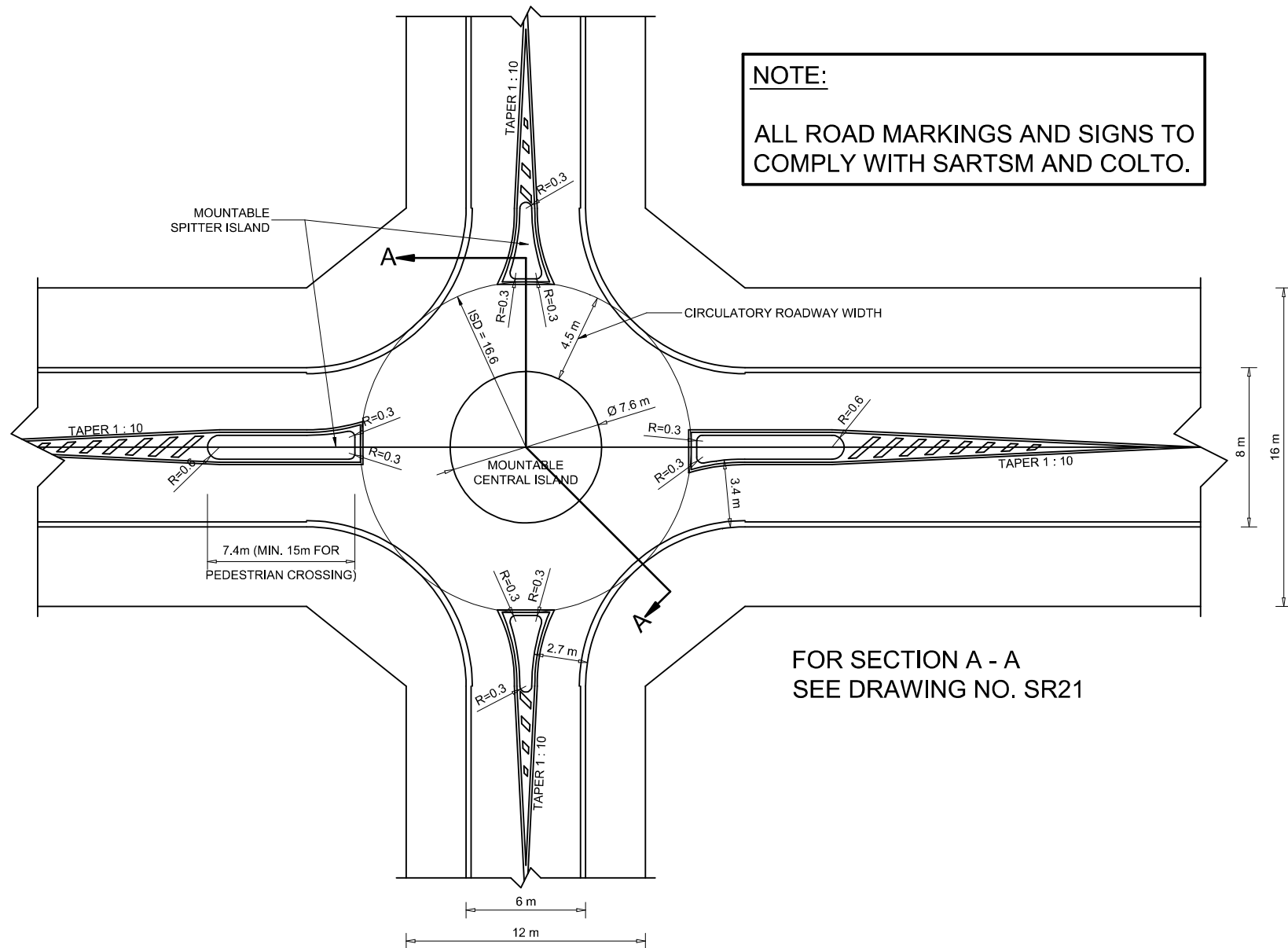
N.T.S.

Paper Size

A4

Drawing No.

SR19



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STANDARD DETAIL DRAWING

TYPICAL MINI ROUNDABOUT AT MIDDLE & LOWER ORDER LINK ROADS

Scale

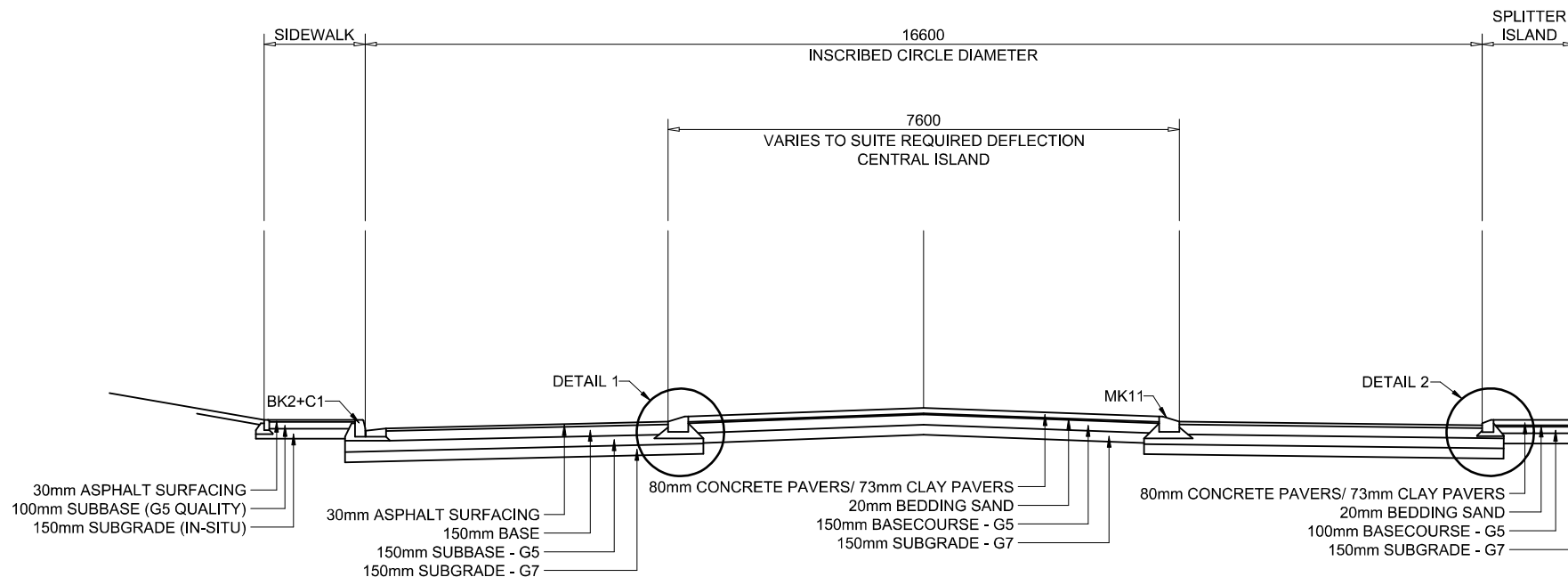
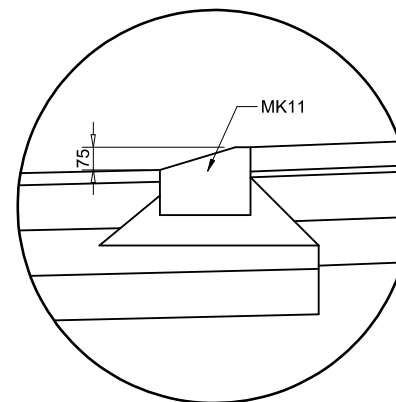
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Paper Size

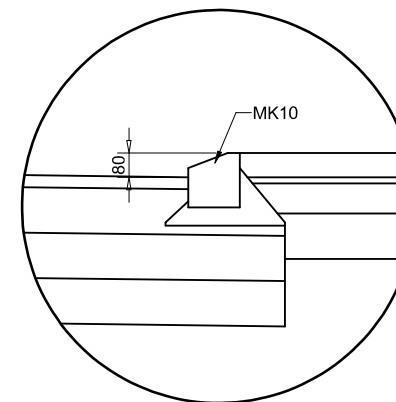
A4

Drawing No.

SR20



DETAIL 1
SCALE N.T.S.



DETAIL 2
SCALE N.T.S.

NOTE:

1. RETROFITTED CIRCLE:
- ROAD LAYERWORKS TO MATCH EXISTING PAVEMENT ON HIGHER OUTER ROAD OR MINIMUM OF THIS STANDARD, WHICHEVER IS THE STRONGEST



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STANDARD DETAIL DRAWING

SECTION (A - A) OF TYPICAL MINI ROUNDABOUT

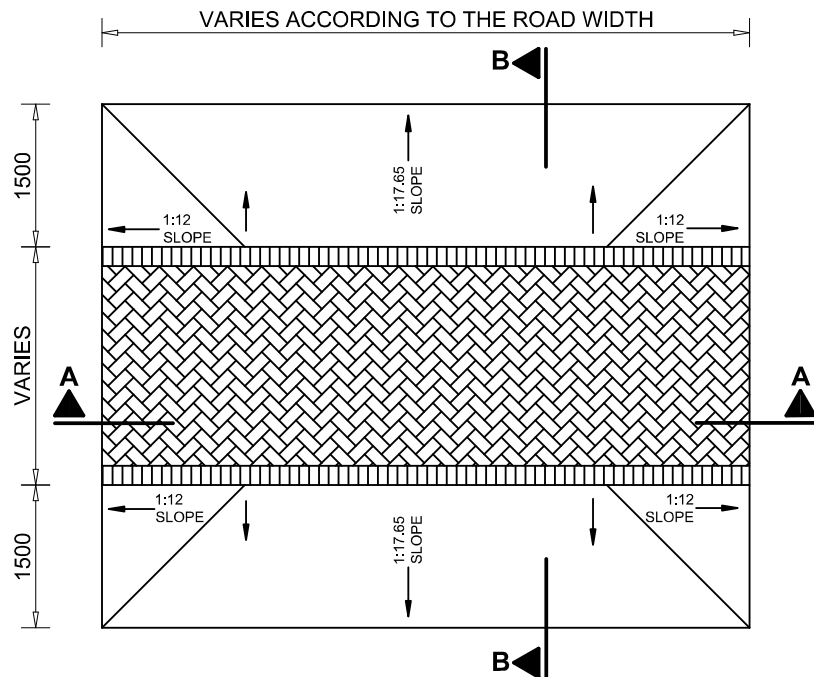
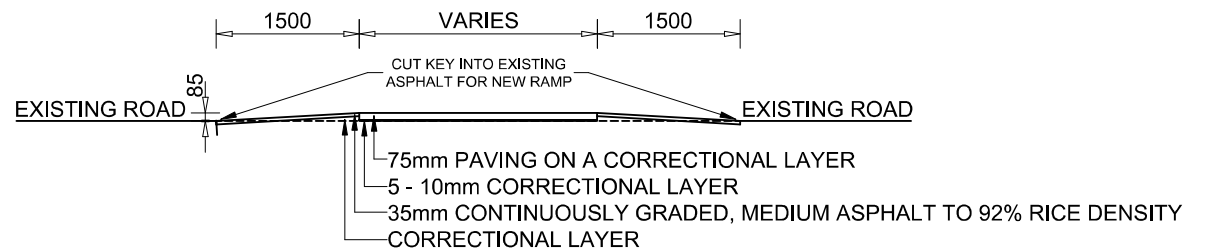
Scale Paper Size

1 : 100

A4

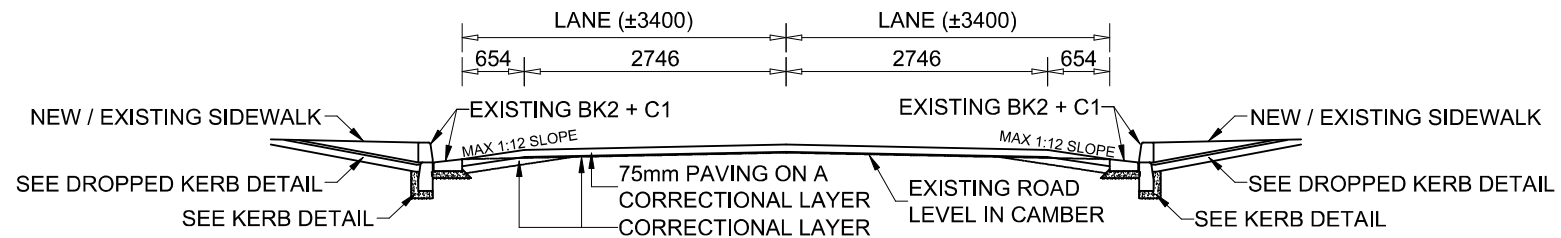
Drawing No.

SR21



LONG SECTION B - B THROUGH CROSSING

RAISED PEDESTRIAN CROSSING PLAN



CROSS SECTION A - A THROUGH CROSSING



STANDARD DETAIL DRAWING

TYPICAL RAISED PEDESTRIAN CROSSING

Scale

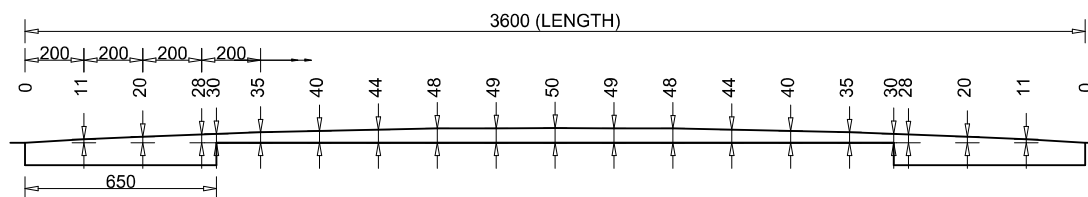
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Paper Size

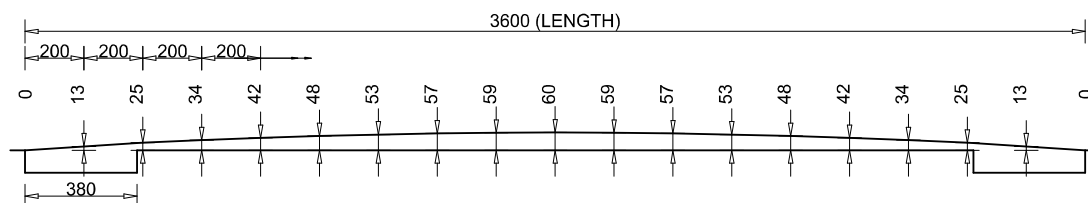
A4

Drawing No.

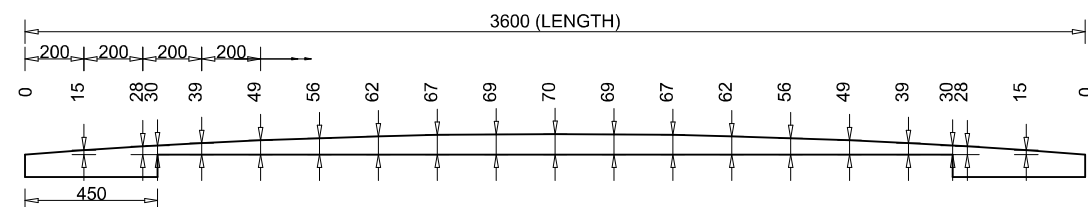
SR22



50mm SPEED HUMP PROFILE (50km/h)



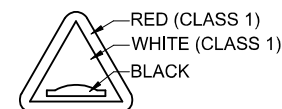
60mm SPEED HUMP PROFILE (40km/h)



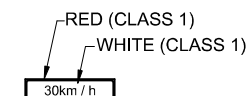
70mm SPEED HUMP PROFILE (30km/h)

NOTES:

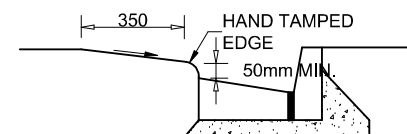
1. SPEED HUMPS SHOULD NOT BE PLACED AT DRIVEWAY ENTRANCES OR STORMWATER GULLIES.
2. W332 AND IN11.1 SHOULD PREFFERABLY BE LOCATED WITHIN 30m AHEAD OF FIRST SPEED HUMP WHEN A SERIES OF SPEED HUMPS ARE USED.
3. SIGN MUST BE ERECTED BEFORE AND ROAD MARKINGS PROVIDED IMMEDIATELY AFTER CONSTRUCTION. ALLOW PREMIX TO COOL BEFORE PAINTING.
4. SPEED HUMP TO BE CONSTRUCTED FROM PREMIX 'TYPE A'. TACK COAT TO BE APPLIED ON ROAD SURFACE BEFORE CONSTRUCTION.



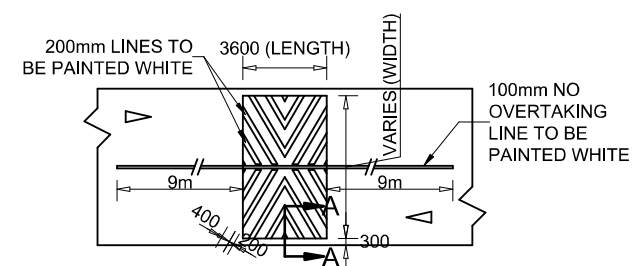
**W332
(SPEED HUMPS)**



**IN11.1
(SUPPLEMENTARY PLATE)**



**EXISTING KERB AND CHANNEL
CROSS - SECTION THROUGH A - A**



WM10 SPEED HUMP



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STANDARD DETAIL DRAWING

TYPICAL SPEED HUMP

Scale

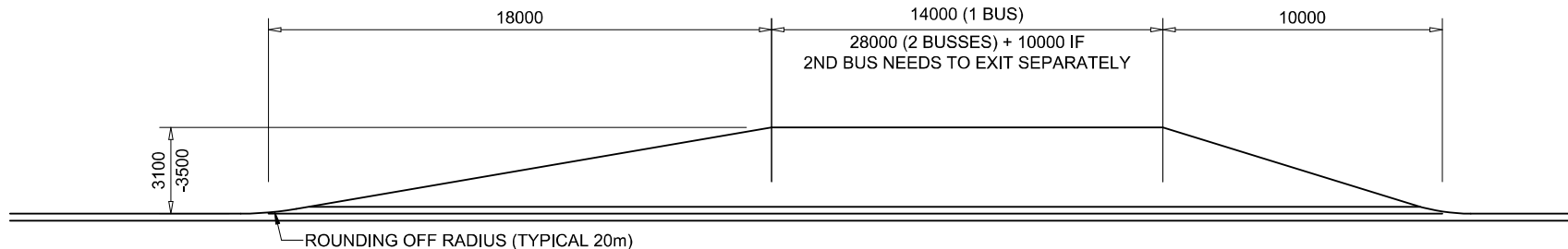
N.T.S.

Paper Size

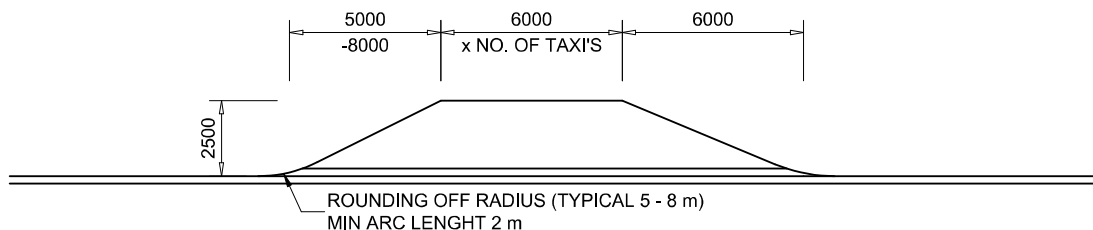
A4

Drawing No.

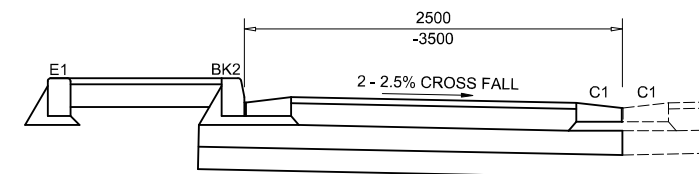
SR23



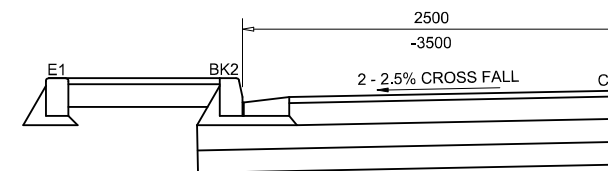
BUS EMBAYMENT



TAXI EMBAYMENT



TYPICAL SECTION WITH CHANNEL



TYPICAL SECTION WITHOUT CHANNEL

NOTE:

WHERE A BUS/TAXI STOP IS REQUIRED AT AN INTERSECTION, IT SHALL BE POSITIONED IMMEDIATELY AFTER THE INTERSECTION. AT PEDESTRIAN CROSSING POINTS, BUS/TAXI EMBAYMENTS SHALL BE POSITIONED IMMEDIATELY PAST THE PEDESTRIAN CROSSING POINT.



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STANDARD DETAIL DRAWING

TYPICAL TAXI AND BUS EMBAYMENT

Scale

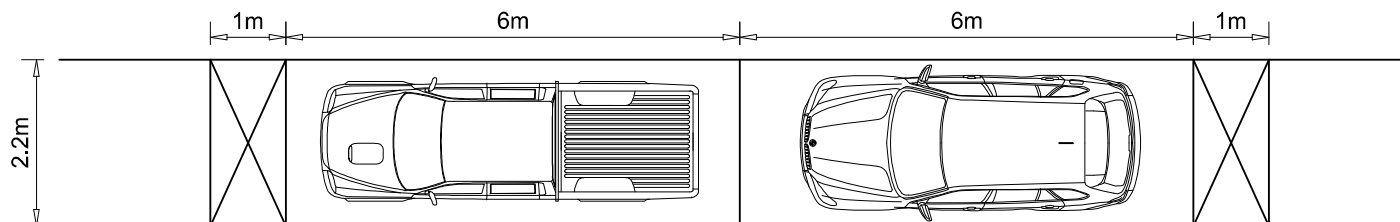
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Paper Size

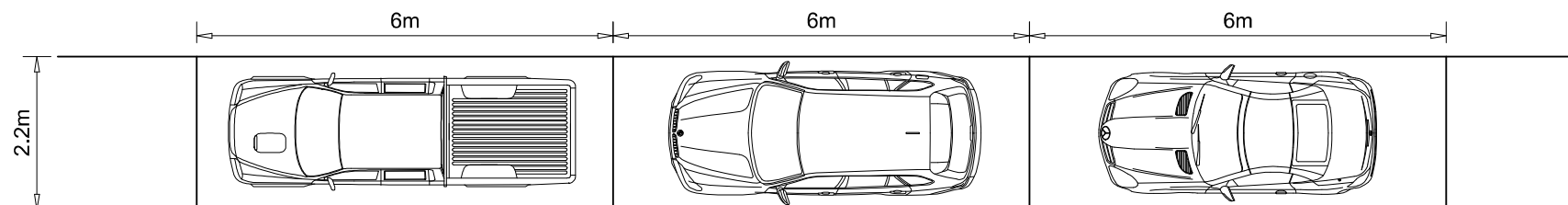
A4

Drawing No.

SR24



RECOMMENDED LAYOUT ALONG HIGHER ORDER LINKS



ABSOLUTE MINIMUM ALONG LOWER ORDER LINKS



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STANDARD DETAIL DRAWING

PARALLEL PARKING BAYS

Scale

1 : 100

Paper Size

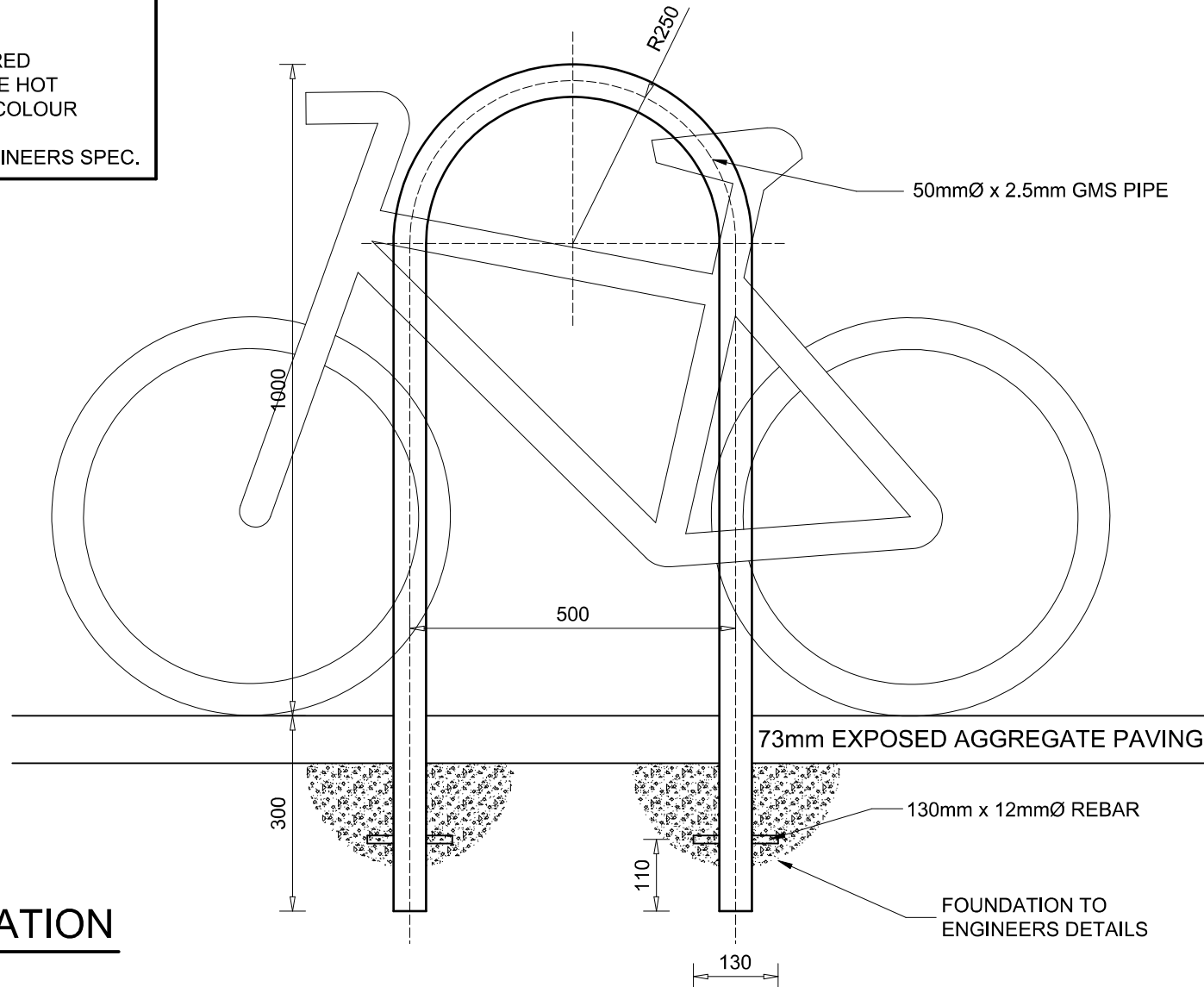
A4

Drawing No.

SR25

NOTES:

1. (5) FIVE RACKS REQUIRED
2. ALL STEEL WORK TO BE HOT DIPPED GALVANISED, COLOUR TO LATER SPEC.
3. FOUNDATIONS TO ENGINEERS SPEC.



ELEVATION



STELLENBOSCH

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STANDARD DETAIL DRAWING

BICYCLE STAND TYPE 1 (1 OF 2)

Scale

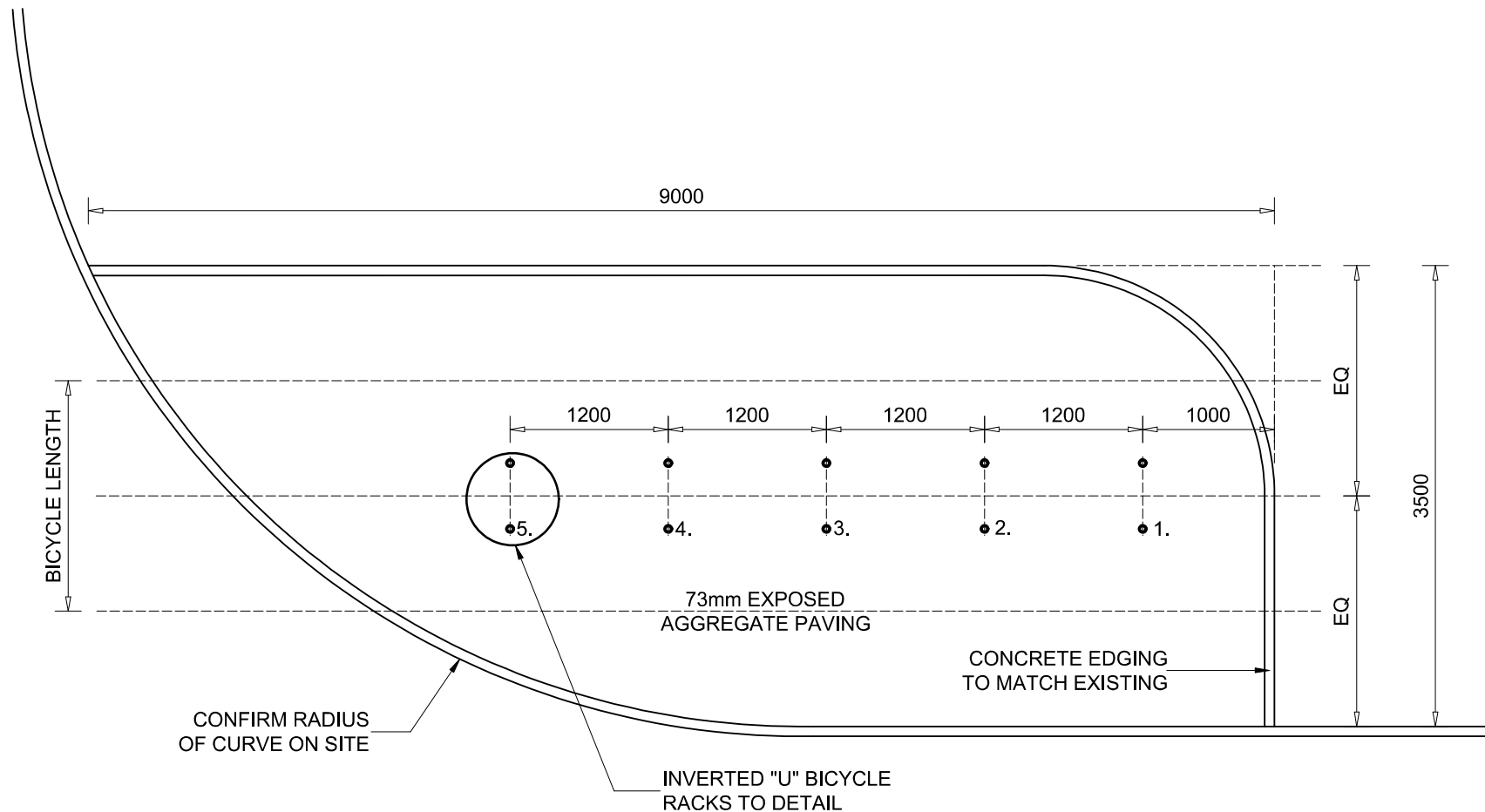
1 : 10

Paper Size

A4

Drawing No.

SR26



LAYOUT PLAN



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STANDARD DETAIL DRAWING

BICYCLE STAND TYPE 1 (2 OF 2)

Scale

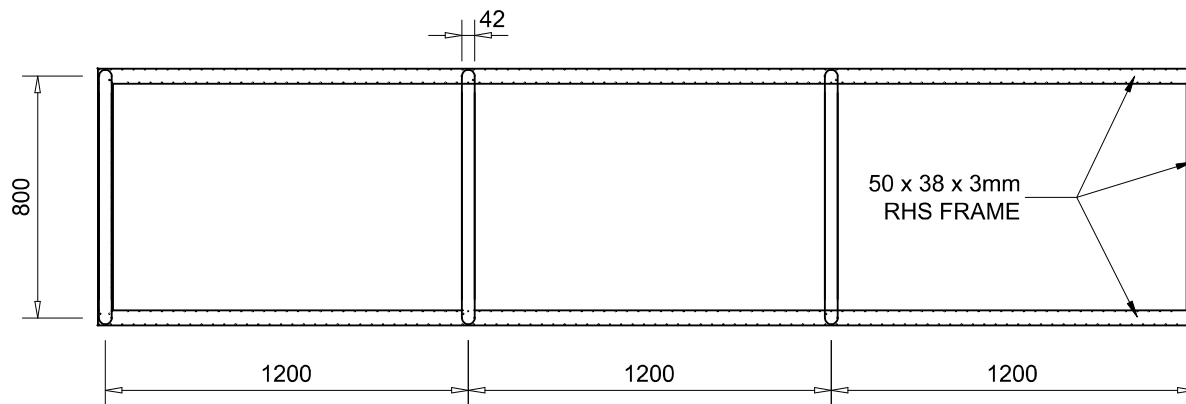
1 : 50

Paper Size

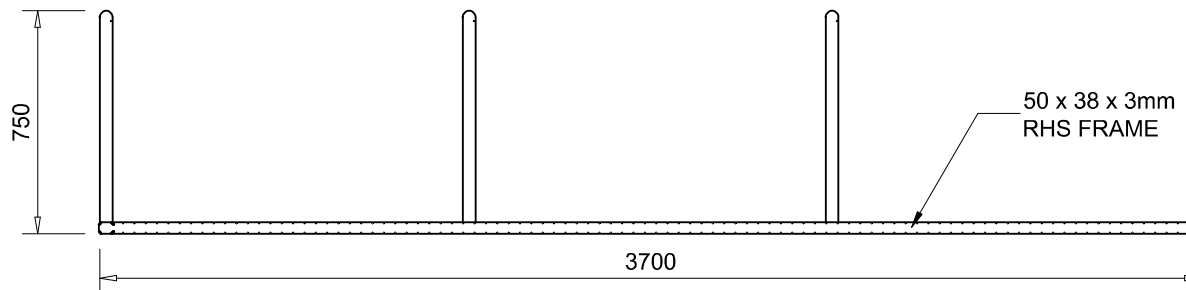
A4

Drawing No.

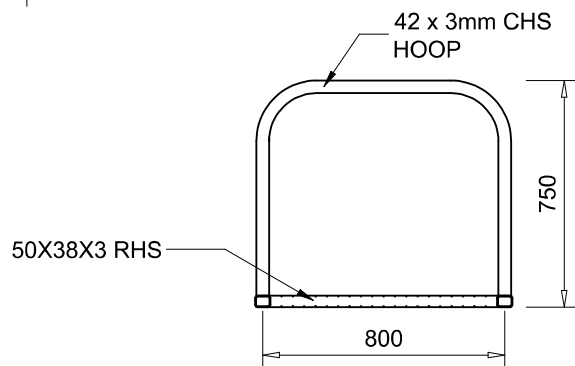
SR27



PLAN VIEW



ELEVATION



SECTION

NOTE:

ALL STEEL TO BE GALVANISED.



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STANDARD DETAIL DRAWING

BICYCLE STAND TYPE 2

Scale

1 : 25

Paper Size

A4

Drawing No.

SR28