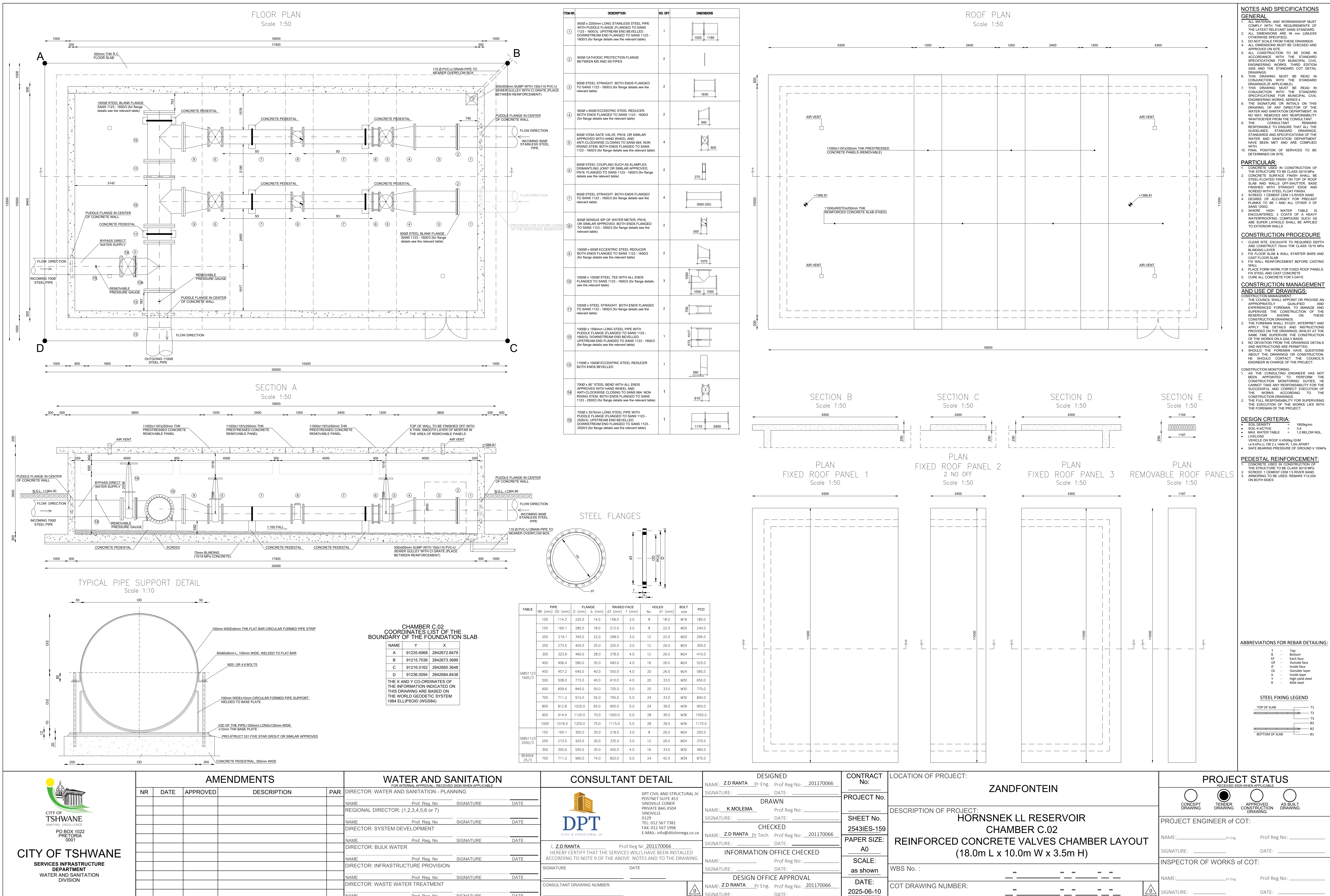
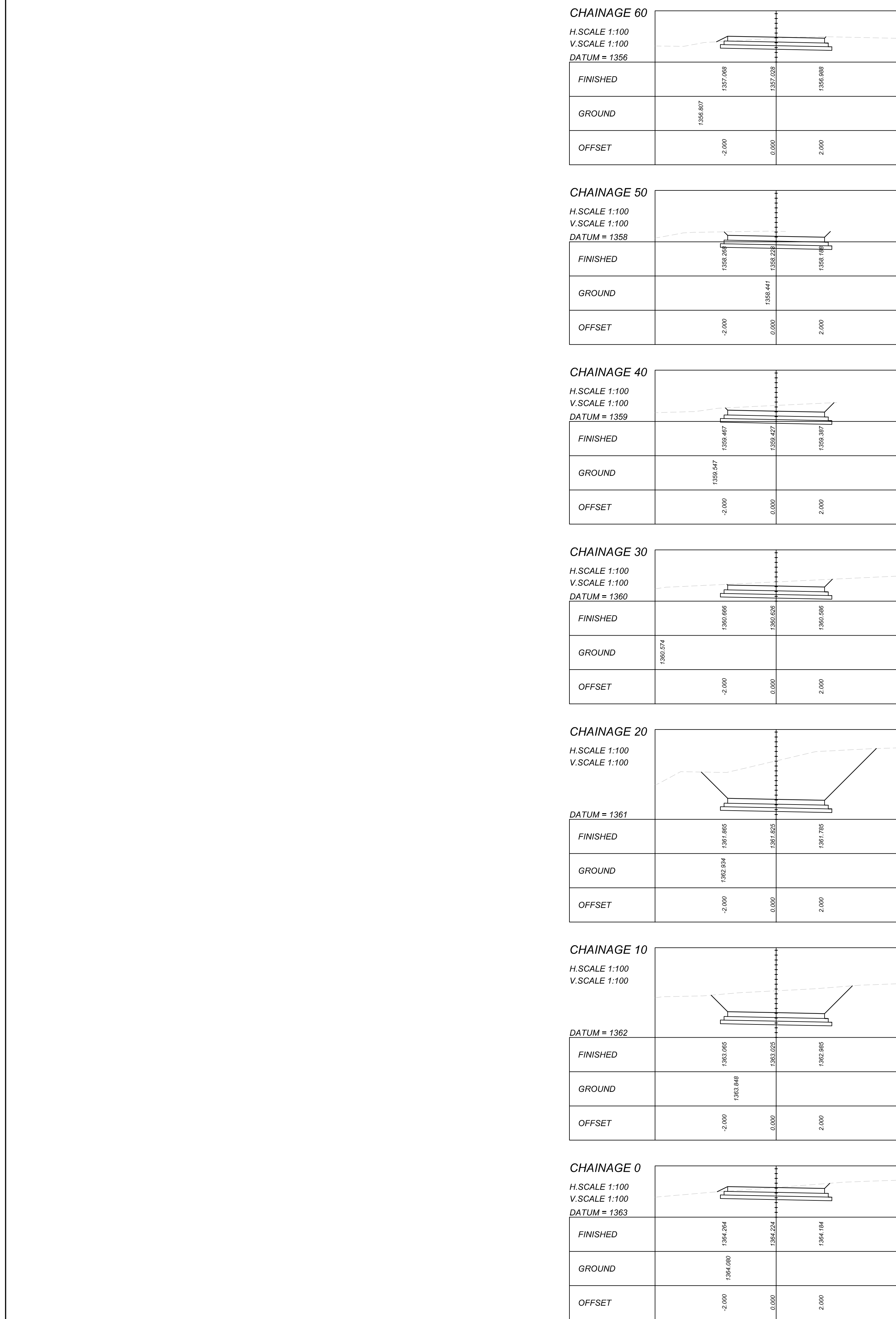

 CITY OF TSHWANE SERVICES INFRASTRUCTURE DEPARTMENT WATER AND SANITATION DIVISION	AMENDMENTS				WATER AND SANITATION				CONSULTANT DETAIL				DESIGNED				CONTRACT				LOCATION OF PROJECT:				PROJECT STATUS				
	NR	DATE	APPROVED	DESCRIPTION	PAR	DIRECTOR: WATER AND SANITATION - PLANNING				DPT CIVIL AND STRUCTURAL IV POSTNET SUITE 453 SINOVILLE CORNER PRIVATE BAG X504 SINOVILLE TEL: 012 567 7381 FAX: 012 567 1996 E-MAIL: info@dptshwane.co.za				NAME: Z.D RANTA Pr Eng. Prof Reg No.: 201170066				PROJECT No.: 2543IES-158				ZANDFONTEIN				RECEIVED SIGN WHEN APPLICABLE			
						NAME: _____ Prof. Reg. No. _____ SIGNATURE _____ DATE _____				NAME: K.MOLEMA Prof. Reg. No.: _____ SIGNATURE _____ DATE _____				DRAWN				SHEET No.: 2543IES-158				DESCRIPTION OF PROJECT: HORNSNEK LL RESERVOIR CHAMBER C.01				PROJECT ENGINEER OF COT: _____			
						REGIONAL DIRECTOR: (1,2,3,4,5,6 or 7)				NAME: Z.D RANTA Pr Tech. Prof. Reg. No.: 201170066				CHECKED				PAPER SIZE: A0				REINFORCED CONCRETE VALVES CHAMBER LAYOUT (18.0m L x 8.0m W x 3.5m H)				INSPECTOR OF WORKS OF COT: _____			
						DIRECTOR: SYSTEM DEVELOPMENT				NAME: _____ Prof. Reg. No. _____ SIGNATURE _____ DATE _____				INFORMATION OFFICE CHECKED				SCALE: as shown				WBS No.: _____				NAME: _____ Prof. Reg. No.: _____			
						DIRECTOR: BULK WATER				NAME: _____ Prof. Reg. No. _____ SIGNATURE _____ DATE _____				DATE: 2025-06-10				DATE: _____				COT DRAWING NUMBER: _____				NAME: _____ Prof. Reg. No.: _____			
						DIRECTOR: INFRASTRUCTURE PROVISION				NAME: _____ Prof. Reg. No. _____ SIGNATURE _____ DATE _____				CONSULTANT DRAWING NUMBER: _____				DATE: _____				DATE: _____				SIGNATURE: _____ DATE: _____			
						DIRECTOR: WASTE WATER TREATMENT				NAME: _____ Prof. Reg. No. _____ SIGNATURE _____ DATE _____				REVISION				DATE: _____				DATE: _____				SIGNATURE: _____ DATE: _____			





- GENERAL**
1. ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.
 2. ALL DIMENSIONS ARE IN MILLIMETRES. (UNLESS OTHERWISE SPECIFIED).
 3. DO NOT SCALE FROM THESE DRAWINGS.
 4. ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.
 5. 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.
 6. THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS (IF APPLICABLE).
 7. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, SERIES 4.
 8. THE SIGNATURE OR INITIALS ON THIS DRAWING OF ANY DIRECTOR OF THE PUBLIC WORKS AND INFRASTRUCTURE DEVELOPMENT DEPARTMENT, IN NO WAY REMOVES ANY RESPONSIBILITY WHATSOEVER FROM THE CONSULTANT.
 9. THE CONSULTANT REMAINS RESPONSIBLE TO ENSURE THAT ALL THE GUIDELINES, STANDARD DRAWINGS, STANDARDS AND SPECIFICATIONS OF THE PUBLIC WORKS AND INFRASTRUCTURE DEVELOPMENT DEPARTMENT HAVE BEEN MET AND ARE COMPLIED WITH.
 10. FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.


CITY OF TSHWANE
SERVICES INFRASTRUCTURE
DEPARTMENT
WATER AND SANITATION
MR DUMISANE GUBUZA
DIVISIONAL HEAD

SIGNATURE _____ Prof. Reg. No. _____ DATE _____

AMENDMENTS				
NR	DATE	APPROVED	DESCRIPTION	PAR
1	10-06-2025	Z.D RANTA	FIRST ISSUE FOR APPROVAL	

WATER AND SANITATION			
FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE			
DIRECTOR: INFRASTRUCTURE PROVISION			
NAME	Prof. Reg. No.	SIGNATURE	DATE
DIRECTOR: WATER DISTRIBUTION			
NAME	Prof. Reg. No.	SIGNATURE	DATE
DIRECTOR: BULK WATER SERVICES			
NAME	Prof. Reg. No.	SIGNATURE	DATE
DIRECTOR: WATER & SANITATION: PLANNING & REGULATION			
NAME	Prof. Reg. No.	SIGNATURE	DATE
DIRECTOR: WASTE WATER COLLECTION			
NAME	Prof. Reg. No.	SIGNATURE	DATE
DIRECTOR: WASTE WATER TREATMENT			
NAME	Prof. Reg. No.	SIGNATURE	DATE

CONSULTANT DETAIL


DPT CIVIL AND STRUCTURAL JV
POSTNET SUITE 453
SINOVILLE CORNER
PRIVATE BAG X504
SINOVILLE
TEL: 012 567 7381
FAX: 012 567 1396
E-MAIL: info@dptshwane.co.za

I, Z.D RANTA Prof. Reg. Nr. 201170066
HEREBY CERTIFY THAT THE SERVICES WILL HAVE BEEN INSTALLED
ACCORDING TO NOTE 9 OF THE ABOVE NOTES AND TO THE DRAWING

SIGNATURE _____ DATE _____

CONSULTANT DRAWING NUMBER _____



DESIGNED
NAME: Z.D RANTA
SIGNATURE: _____ DATE: _____

DRAWN
NAME: K. MOLEMA
SIGNATURE: _____ DATE: _____

CHECKED
NAME: Z.D RANTA
SIGNATURE: _____ DATE: _____

INFORMATION OFFICE CHECKED
NAME: _____
SIGNATURE: _____ DATE: _____

DESIGN OFFICE APPROVAL
NAME: Z.D RANTA
SIGNATURE: _____ DATE: _____

CONTRACT No.

PROJECT No.
DPT - C0001

SHEET No.
1 of 3

PAPER SIZE
A0

SCALE
1:1000


DATE:
JUNE 2025

LOCATION OF PROJECT
BOOYSENS EXTENSION 4





DESCRIPTION OF PROJECT:
HORNSNEK RESERVOIR
ACCESS ROAD - CROSS SECTIONS

WBS No.

COT DRAWING NUMBER



PROJECT STATUS

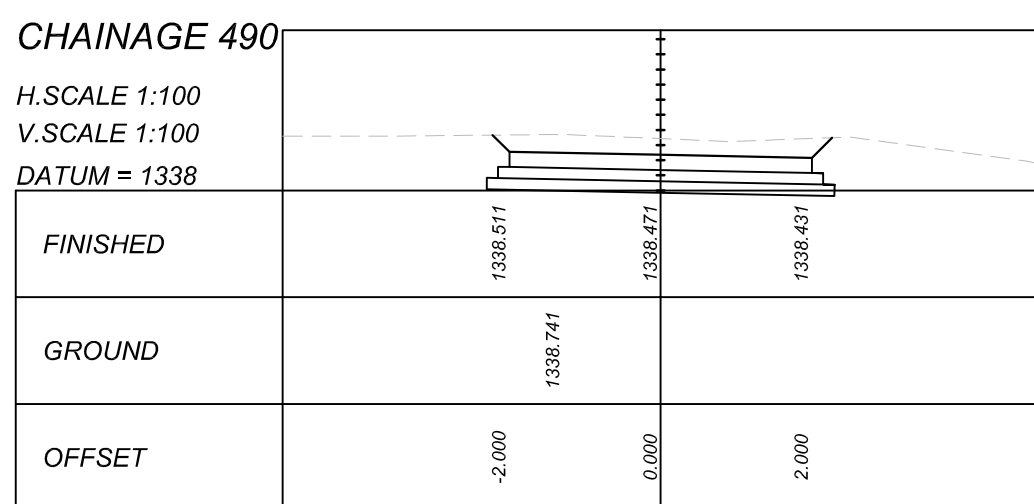
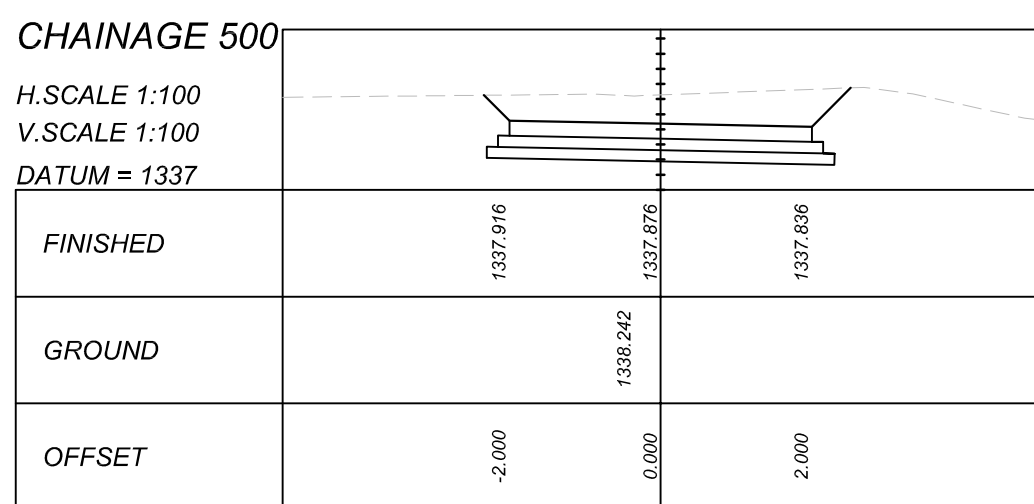
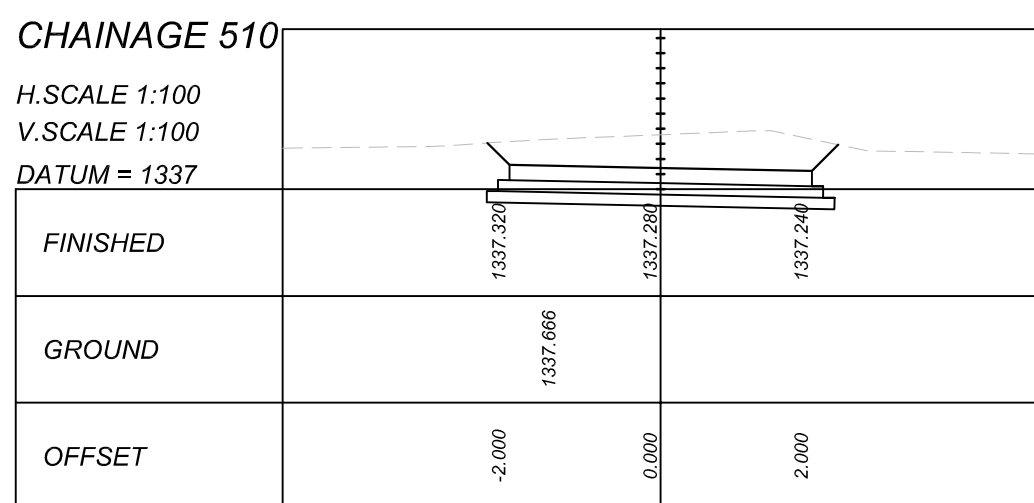
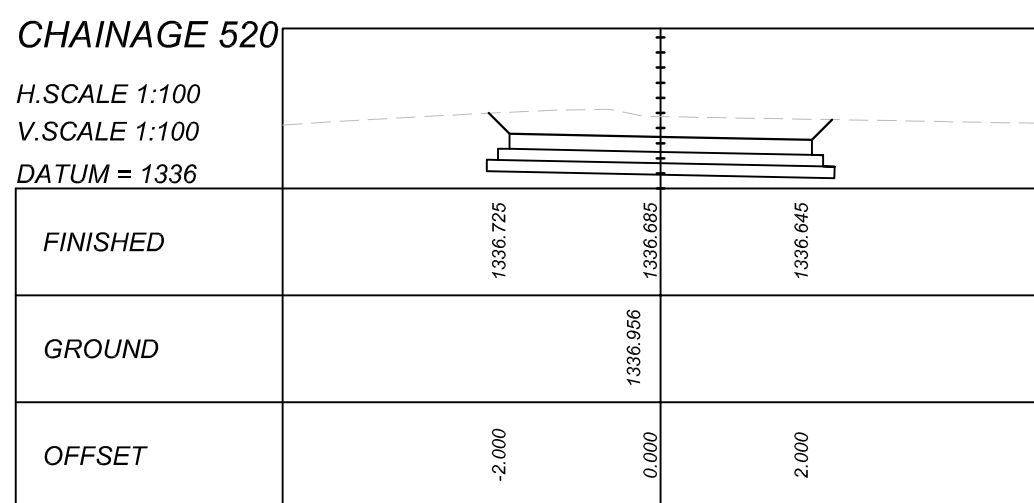
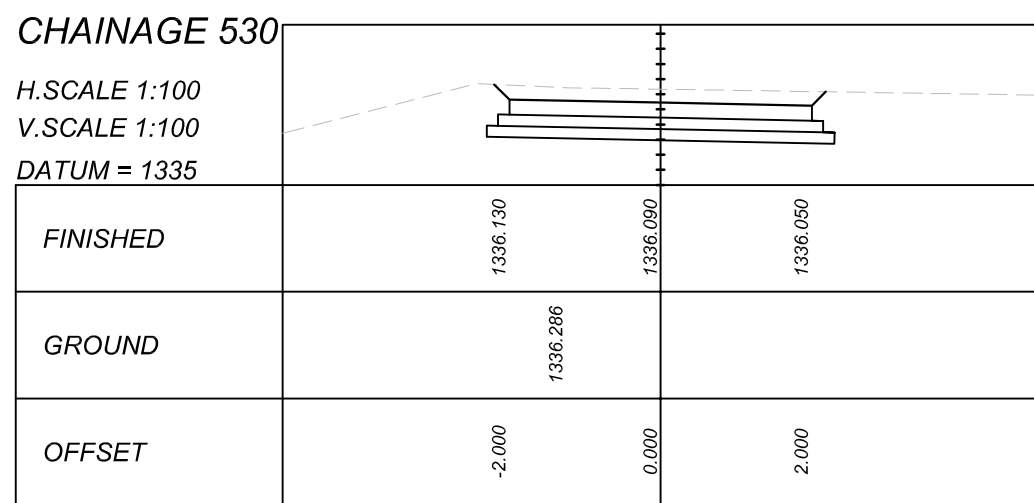
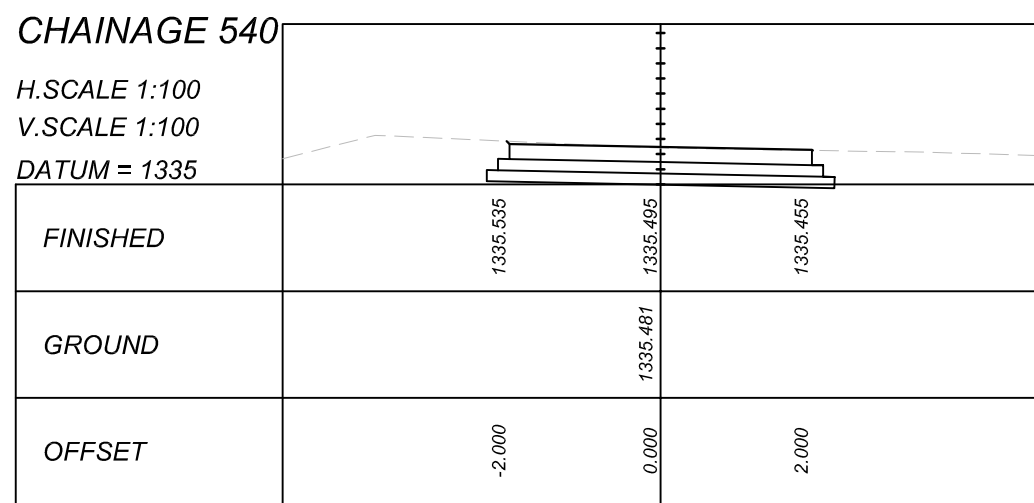
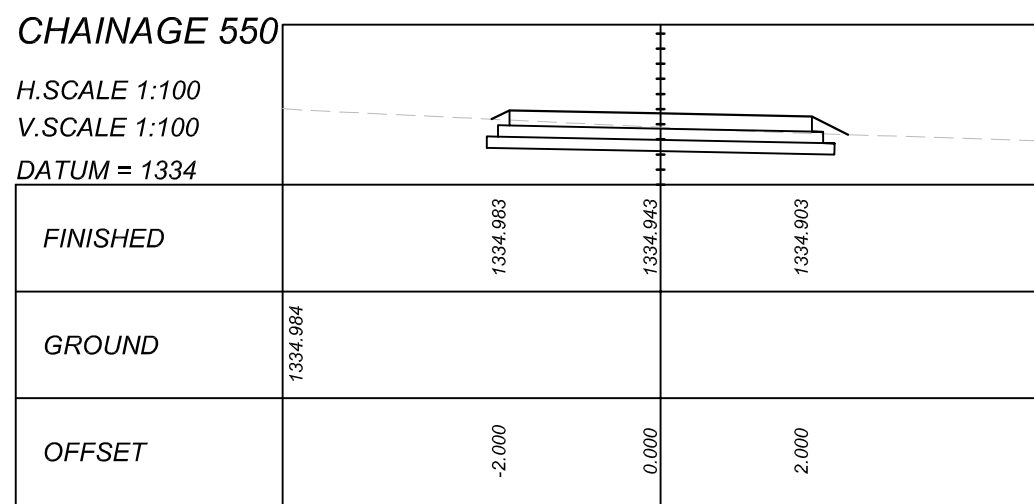
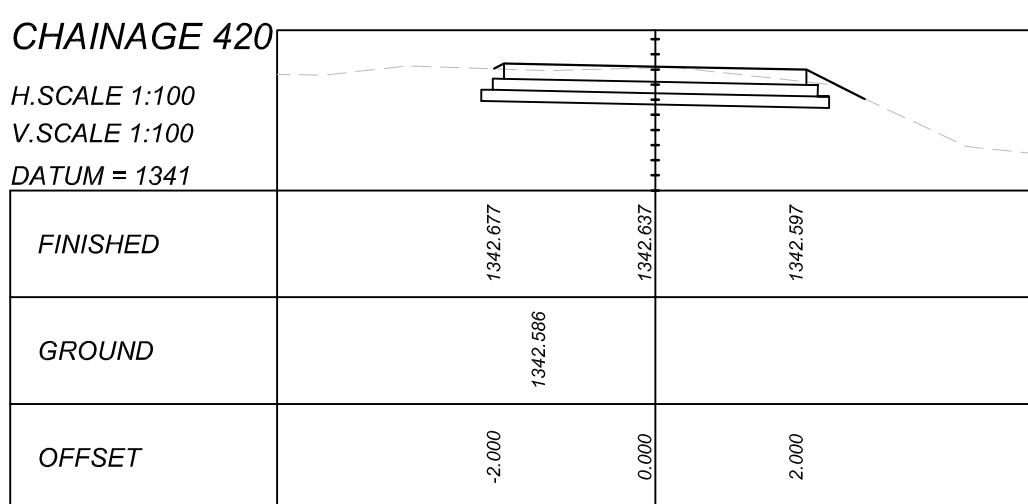
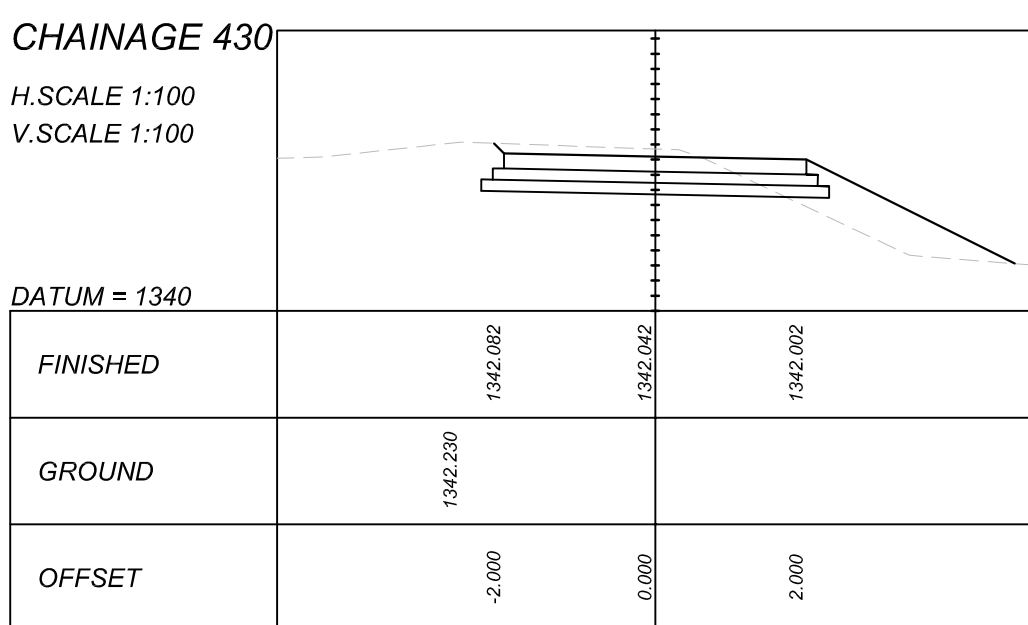
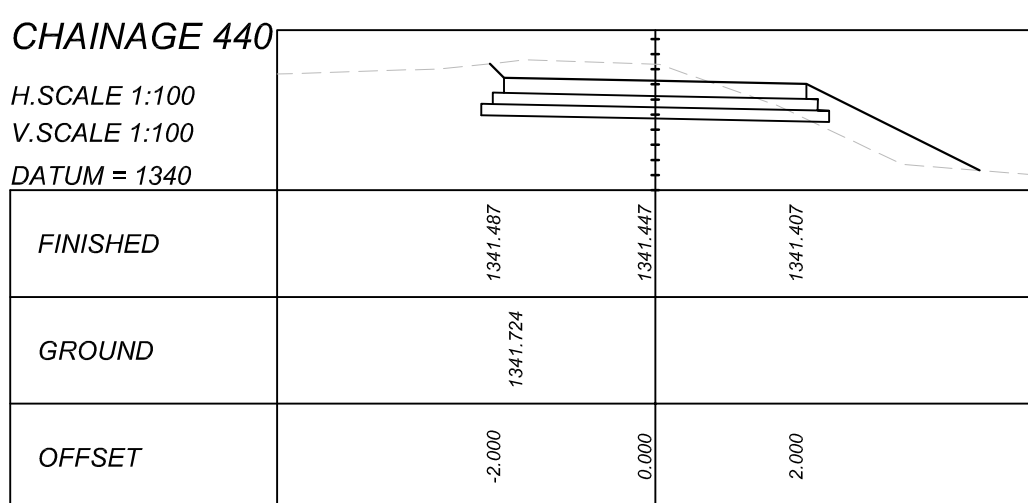
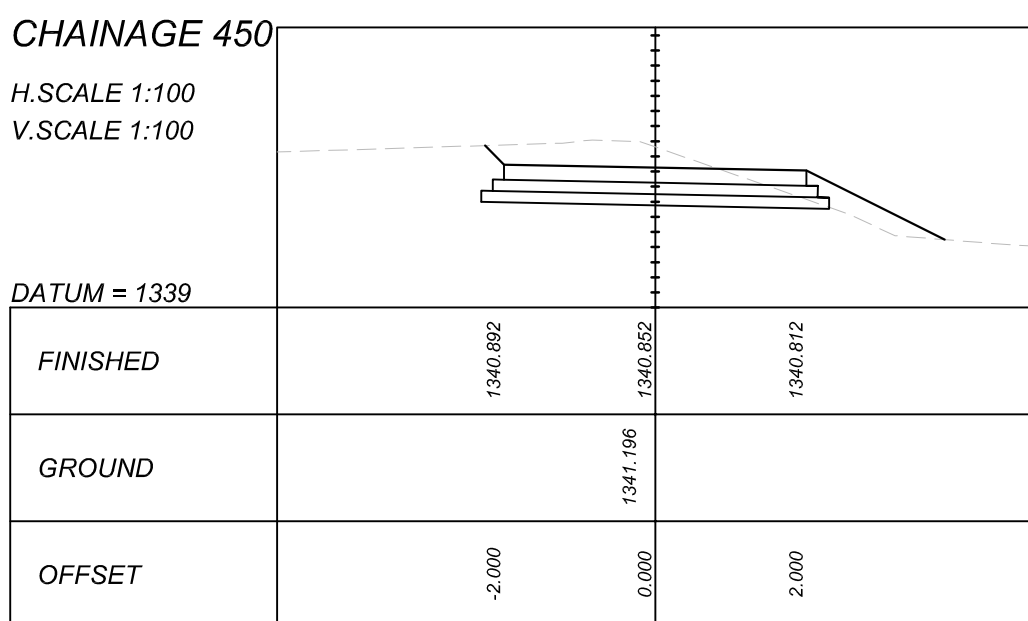
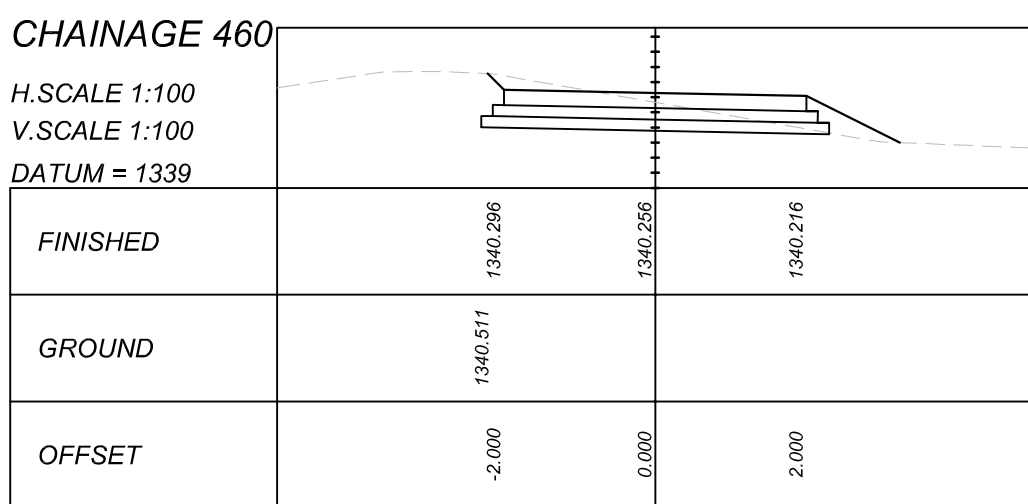
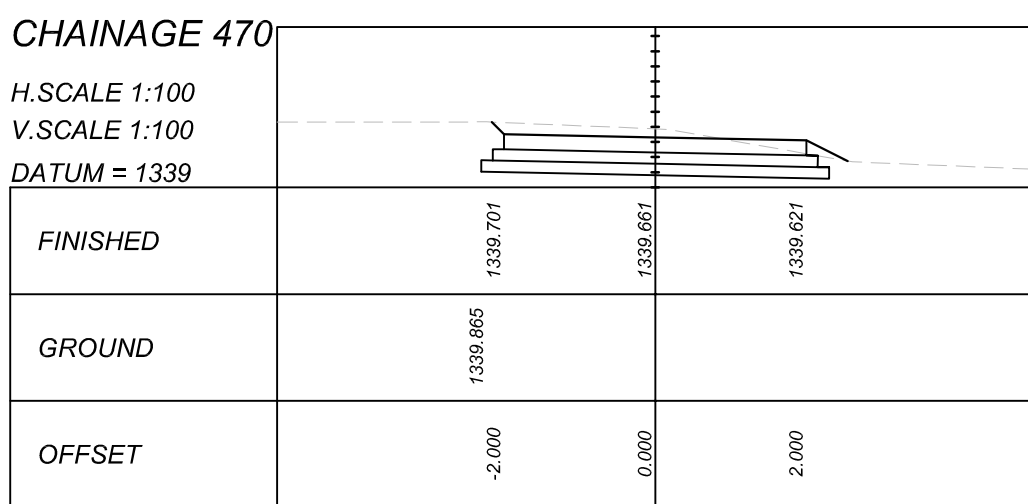
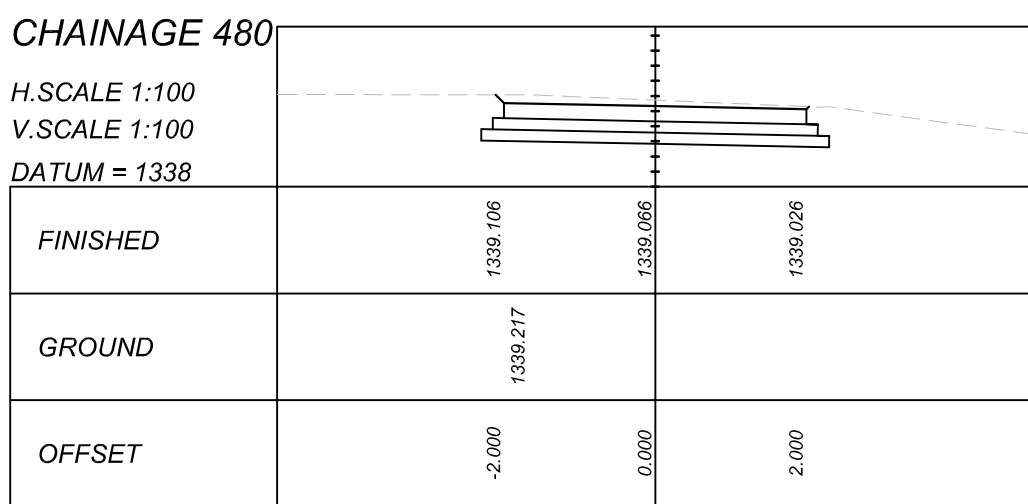
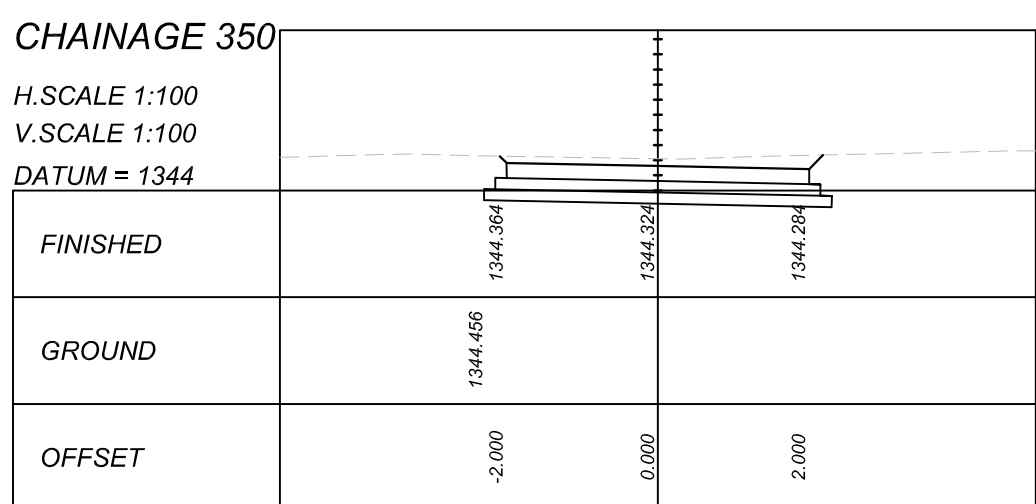
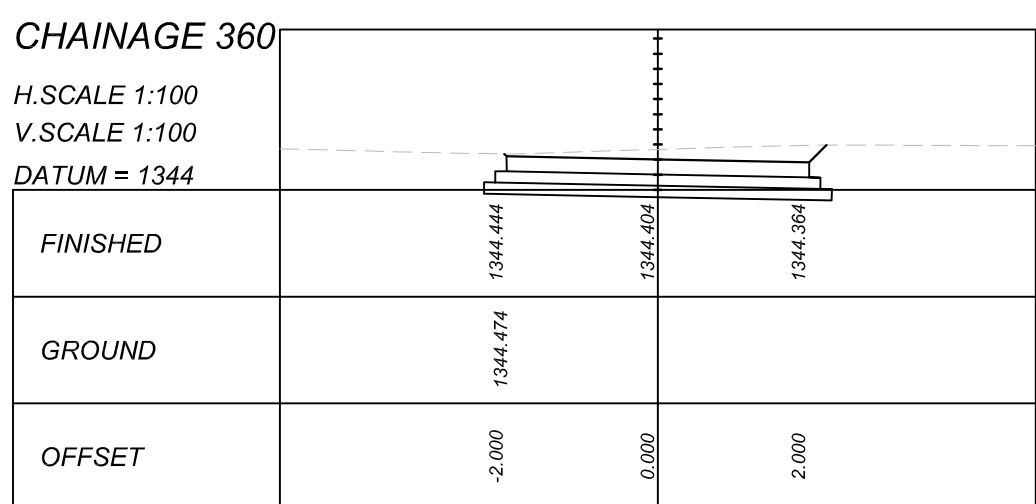
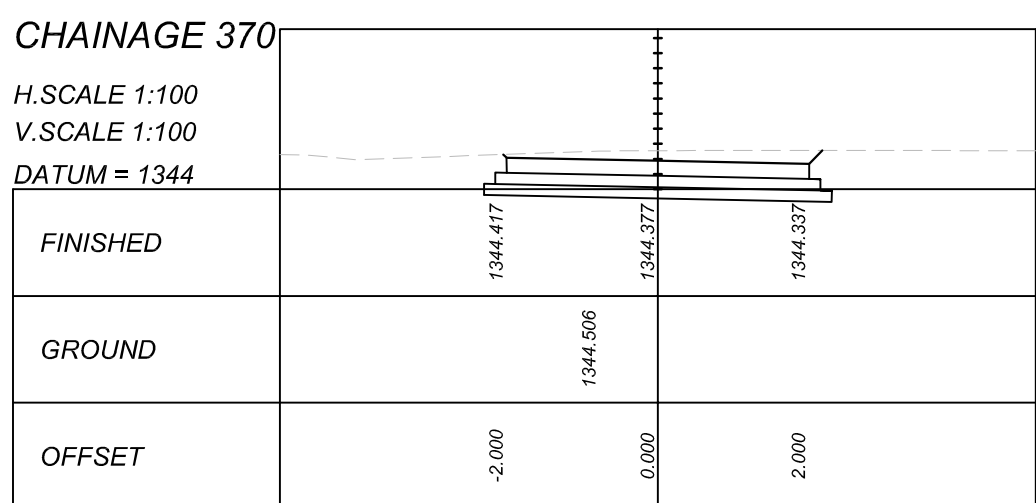
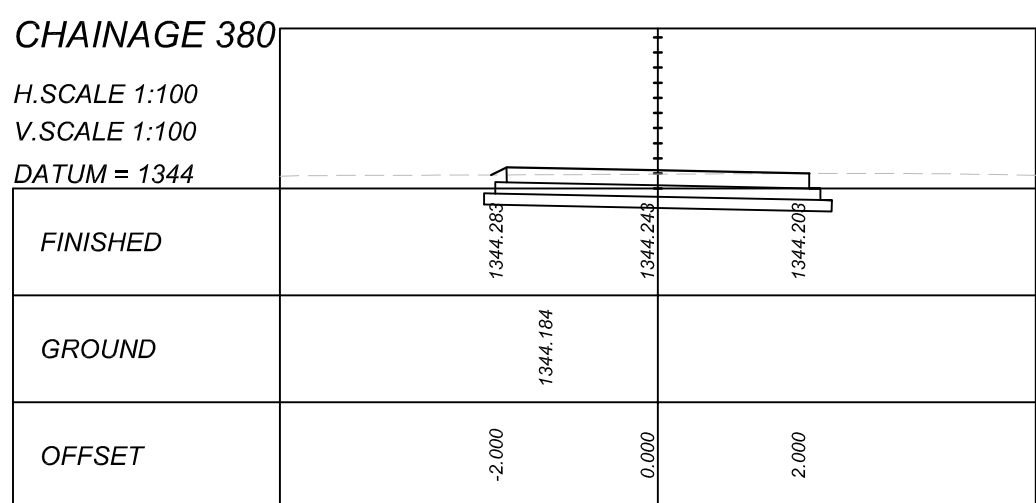
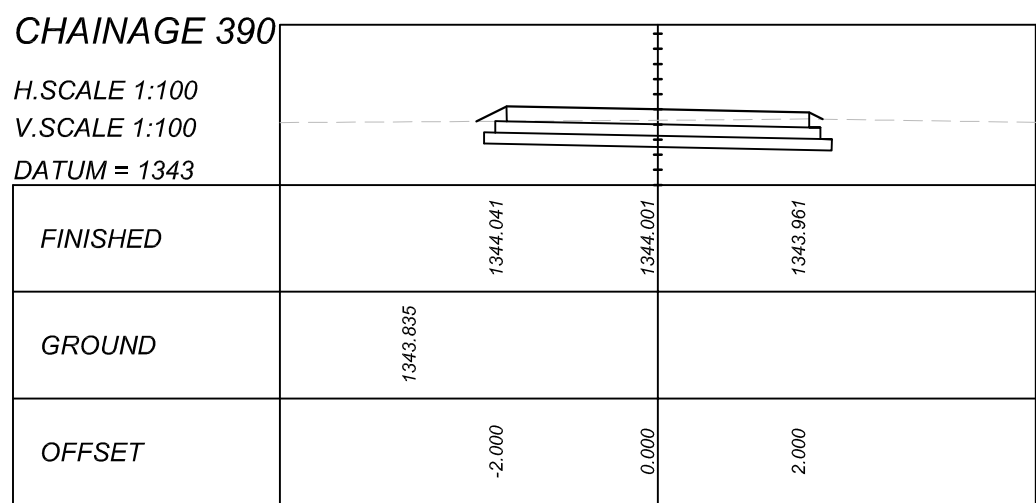
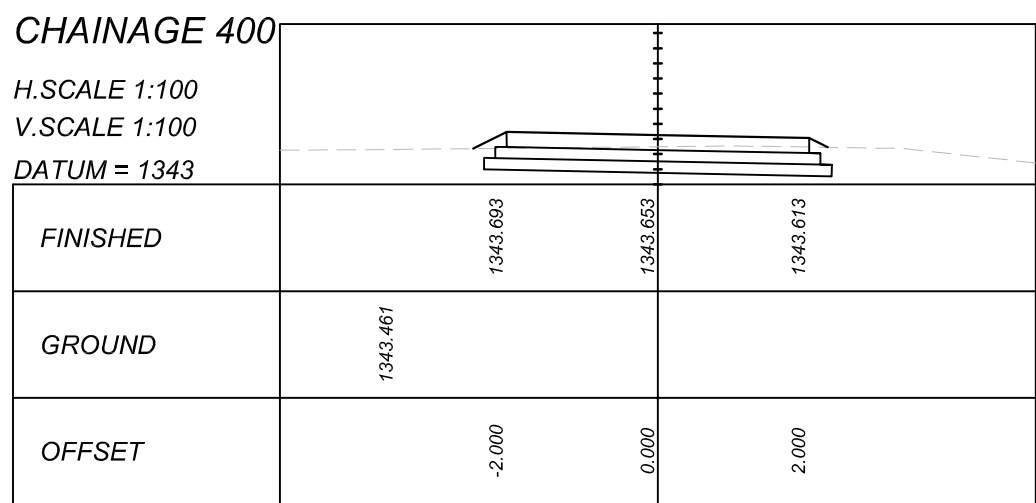
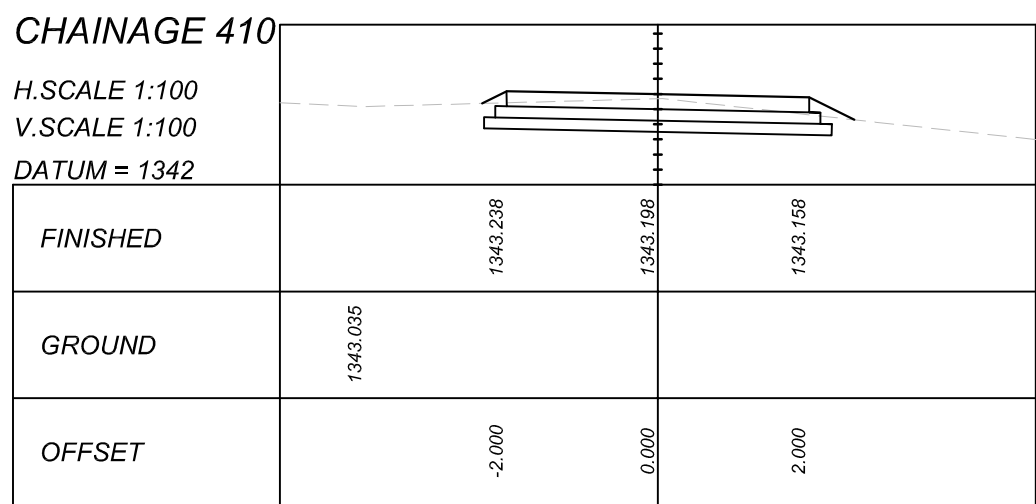
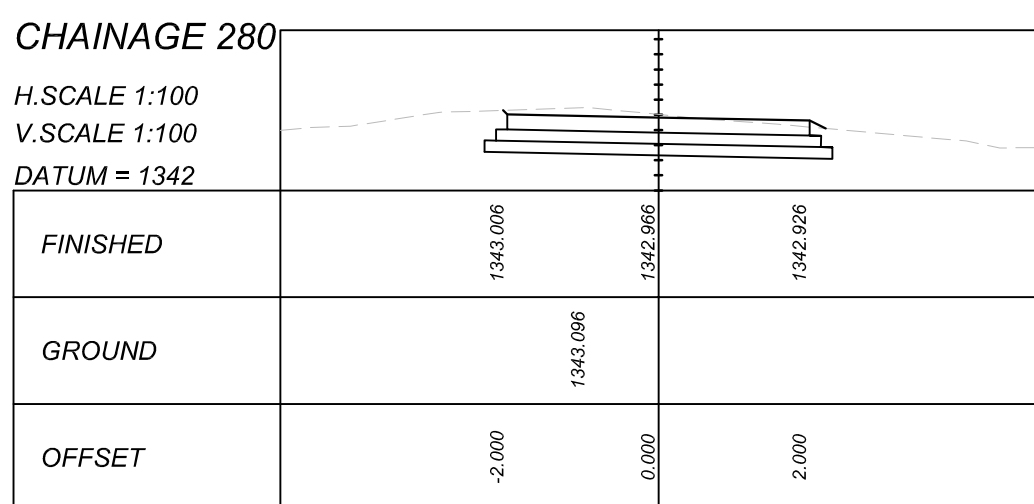
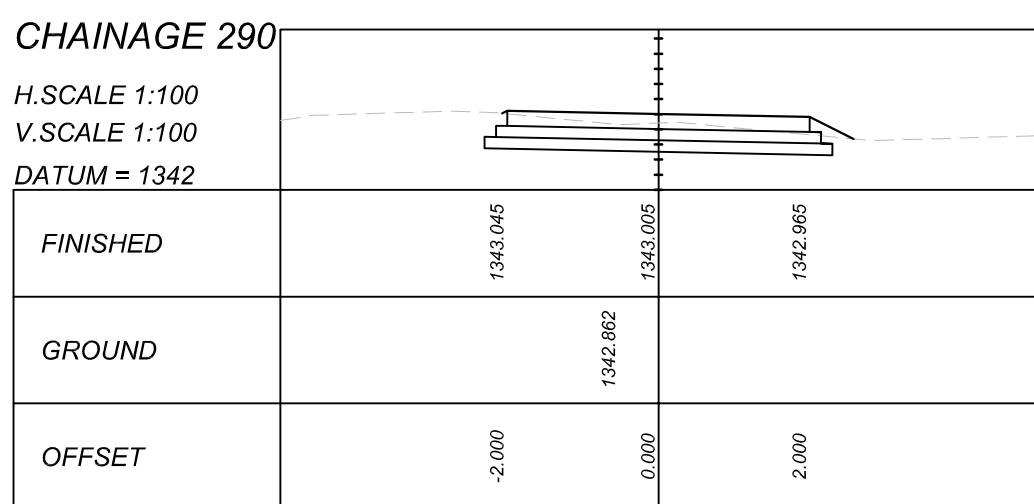
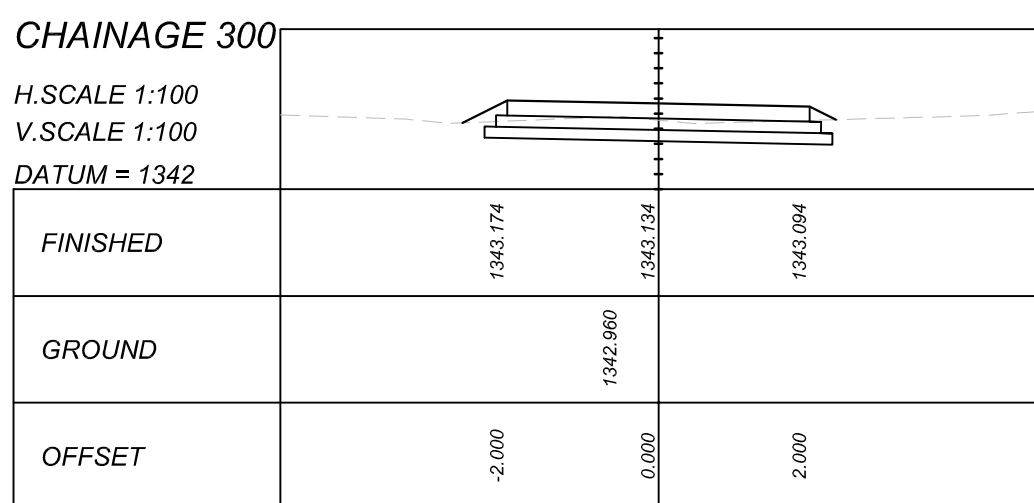
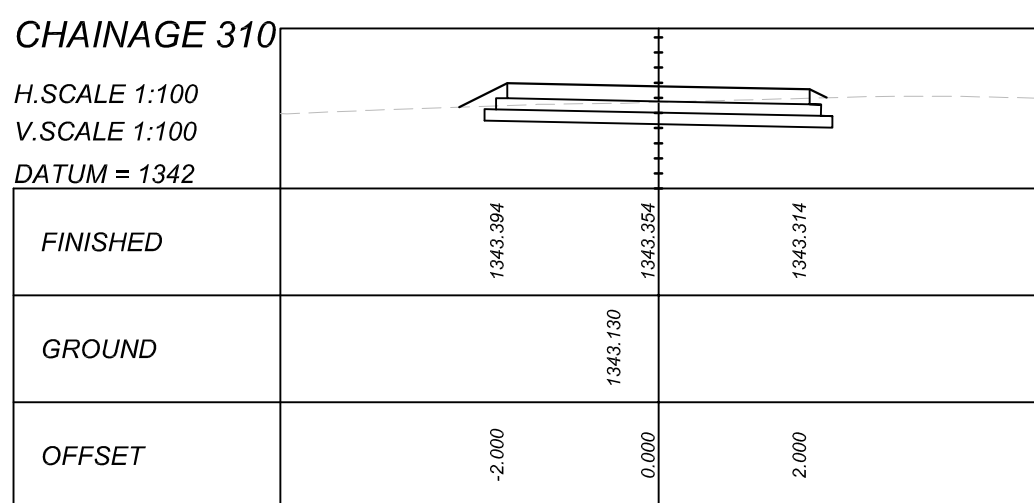
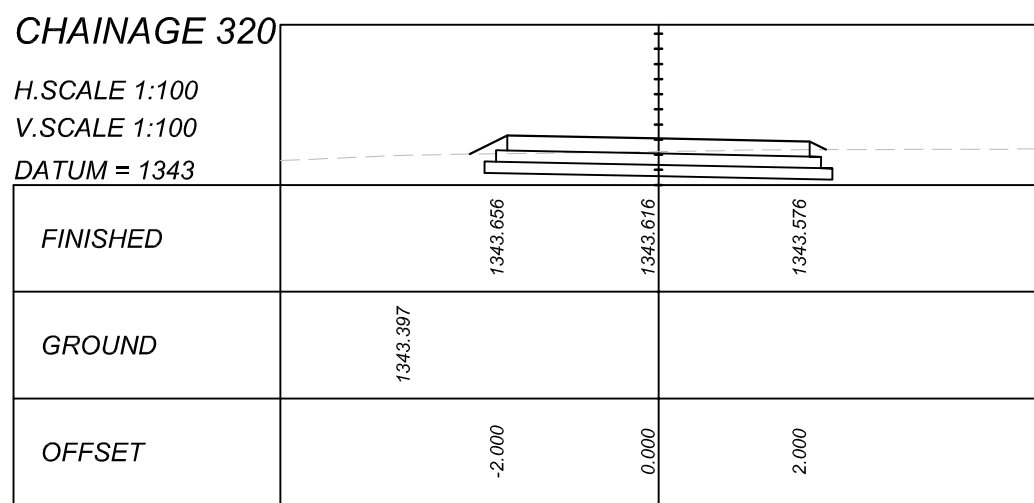
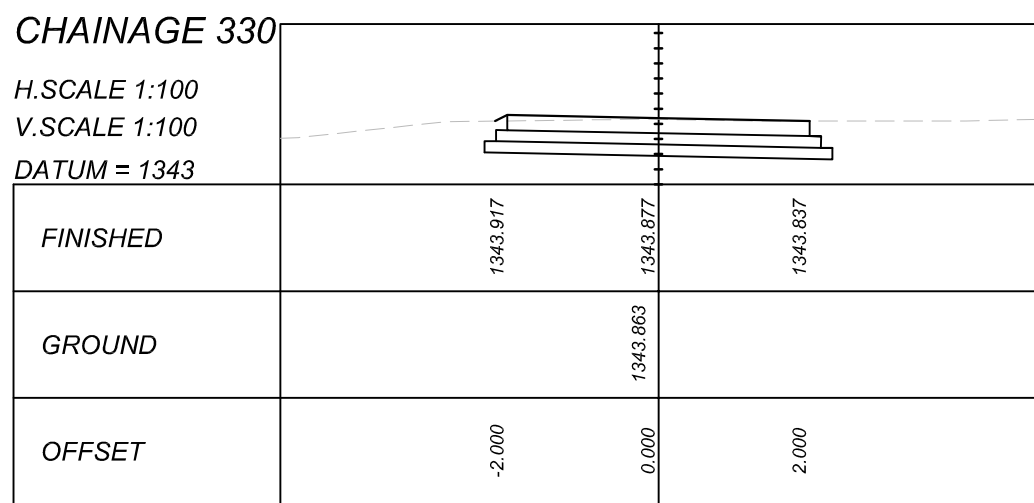
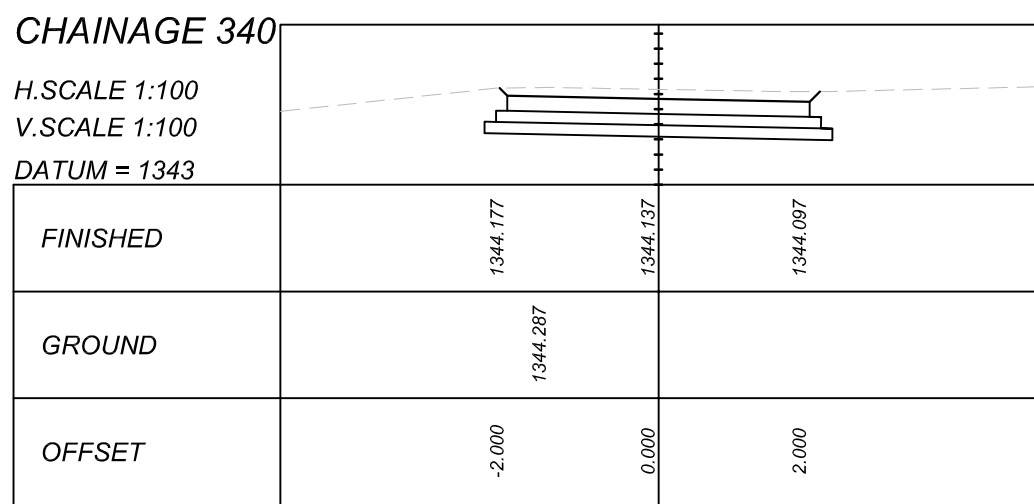
 CONCEPT DRAWING
 TENDER DRAWING
 APPROVED CONSTRUCTION DRAWING
 AS BUILT DRAWING

PROJECT ENGINEER of COT:
NAME _____ SIGNATURE _____
Prof. Reg No. _____ DATE _____

INSPECTOR OF WORKS of COT:
NAME _____ SIGNATURE _____
DATE _____

GENERAL

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CITY OF TSHWANE
SERVICES INFRASTRUCTURE
DEPARTMENT
WATER AND SANITATION
MR DUMISANE GUBUZA
DIVISIONAL HEAD

SIGNATURE _____ Prof. Reg. No. _____ DATE _____

AMENDMENTS

NR	DATE	APPROVED	DESCRIPTION	PAR
1	10-06-2025	Z.D RANTA	FIRST ISSUE FOR APPROVAL	

WATER AND SANITATION

FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE

DIRECTOR: INFRASTRUCTURE PROVISION			
NAME	Prof. Reg. No.	SIGNATURE	DATE
DIRECTOR: WATER DISTRIBUTION			
NAME	Prof. Reg. No.	SIGNATURE	DATE
DIRECTOR: BULK WATER SERVICES			
NAME	Prof. Reg. No.	SIGNATURE	DATE
DIRECTOR: WATER & SANITATION: PLANNING & REGULATION			
NAME	Prof. Reg. No.	SIGNATURE	DATE
DIRECTOR: WASTE WATER COLLECTION			
NAME	Prof. Reg. No.	SIGNATURE	DATE
DIRECTOR: WASTE WATER TREATMENT			
NAME	Prof. Reg. No.	SIGNATURE	DATE
NAME	Prof. Reg. No.	SIGNATURE	DATE

CONSULTANT DETAIL

DPT CIVIL AND STRUCTURAL JV
POSTNET SUITE 453
SINOVILLE CORNER
PRIVATE BAG X504
SINOVILLE
0129
TEL: 012 567 7381
FAX: 012 567 1996
E-MAIL: info@dptswmeco.co.za

I, Z.D RANTA Prof. Reg. Nr. 201170066
HEREBY CERTIFY THAT THE SERVICES WILL HAVE BEEN INSTALLED
ACCORDING TO NOTE 9 OF THE ABOVE NOTES AND TO THE DRAWING
SIGNATURE _____ DATE _____
CONSULTANT DRAWING NUMBER _____

DESIGNED

NAME: Z.D RANTA Prof. Reg. No. 201170066

SIGNATURE: _____ DATE: _____

DRAWN

NAME: K. MOLEMA

SIGNATURE: _____ DATE: _____

CHECKED

NAME: Z.D RANTA Prof. Reg. No. 201170066

SIGNATURE: _____ DATE: _____

INFORMATION OFFICE CHECKED

NAME: _____ DATE: _____

SIGNATURE: _____ DATE: _____

DESIGN OFFICE APPROVAL

NAME: Z.D RANTA Prof. Reg. No. 201170066

SIGNATURE: _____ DATE: _____

CONTRACT

No. _____

PROJECT No.

DPT - C0001

SHEET No.

2 of 3

PAPER SIZE

A0

SCALE

1:1000

DATE: JUNE 2025

LOCATION OF PROJECT

BOOYSENS EXTENSION 4

DESCRIPTION OF PROJECT:

HORNSNEK RESERVOIR
ACCESS ROAD - CROSS SECTIONS

WBS No. _____

COT DRAWING NUMBER _____

PROJECT STATUS

CONCEPT DRAWING TENDER DRAWING APPROVED CONSTRUCTION DRAWING AS BUILT DRAWING

PROJECT ENGINEER of COT:

NAME SIGNATURE

Prof. Reg. No. DATE

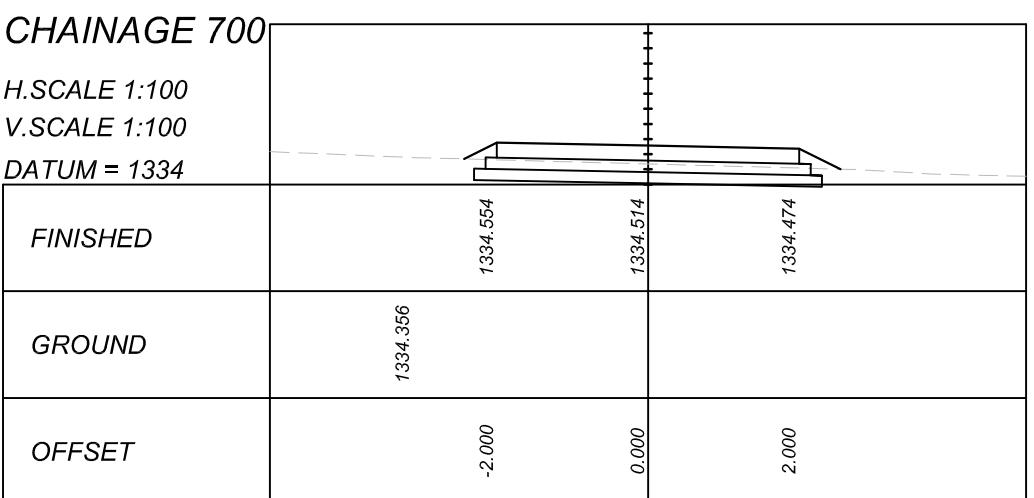
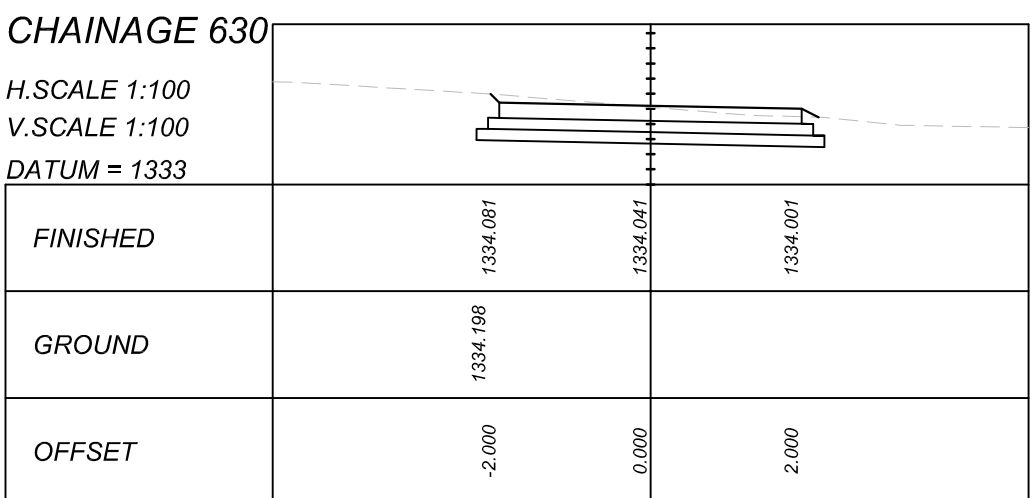
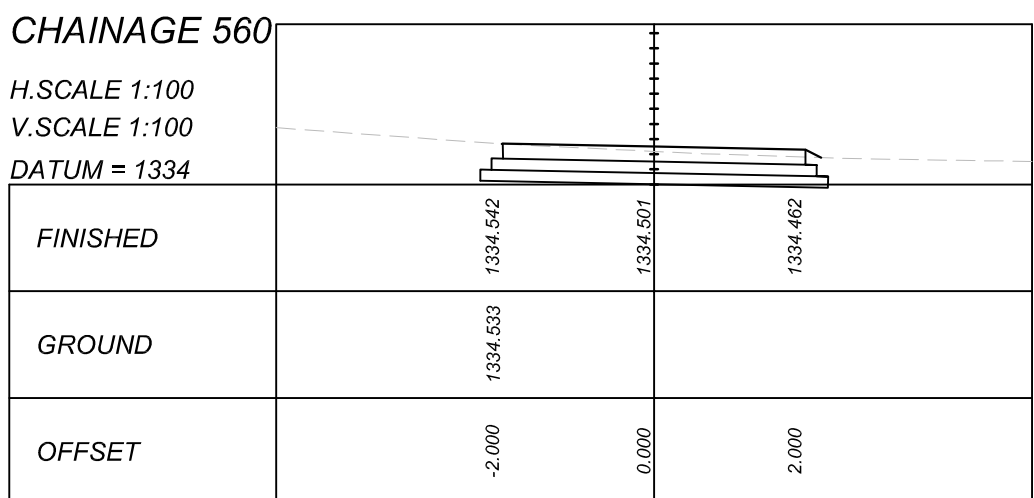
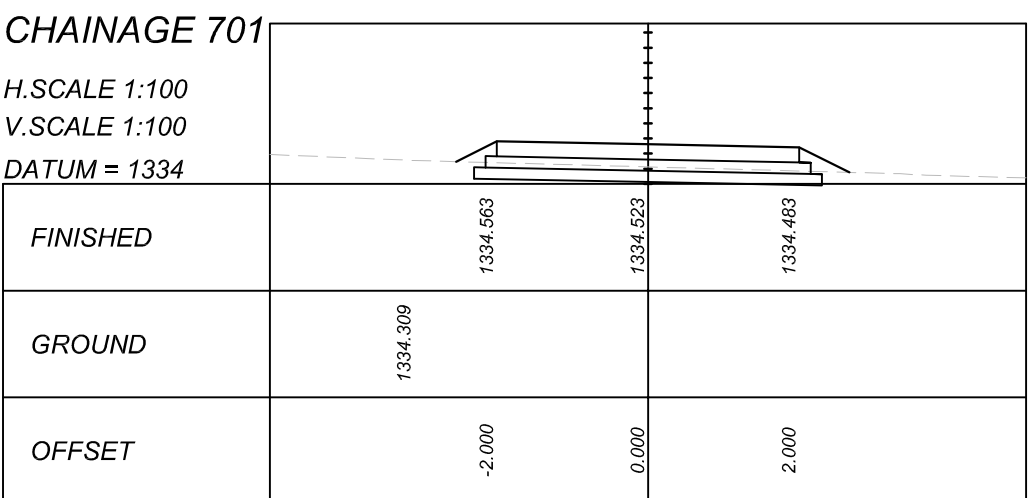
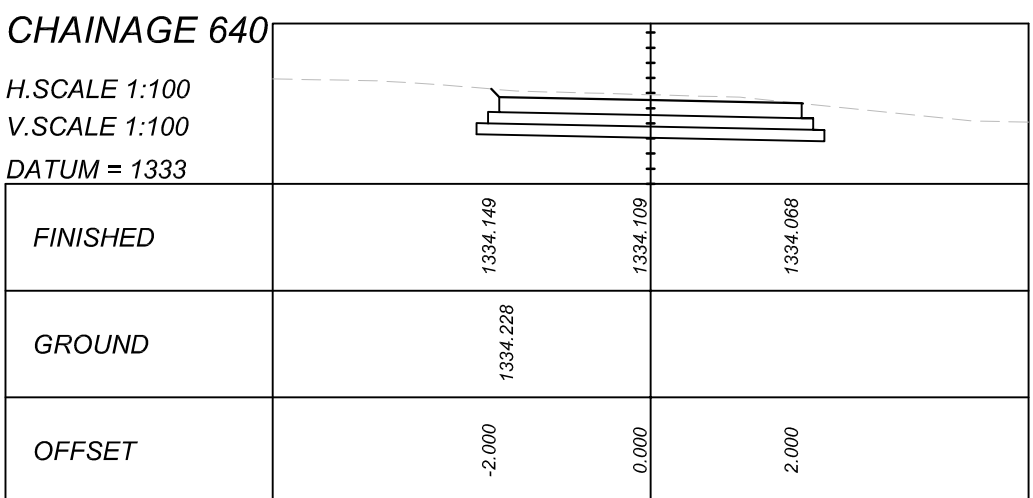
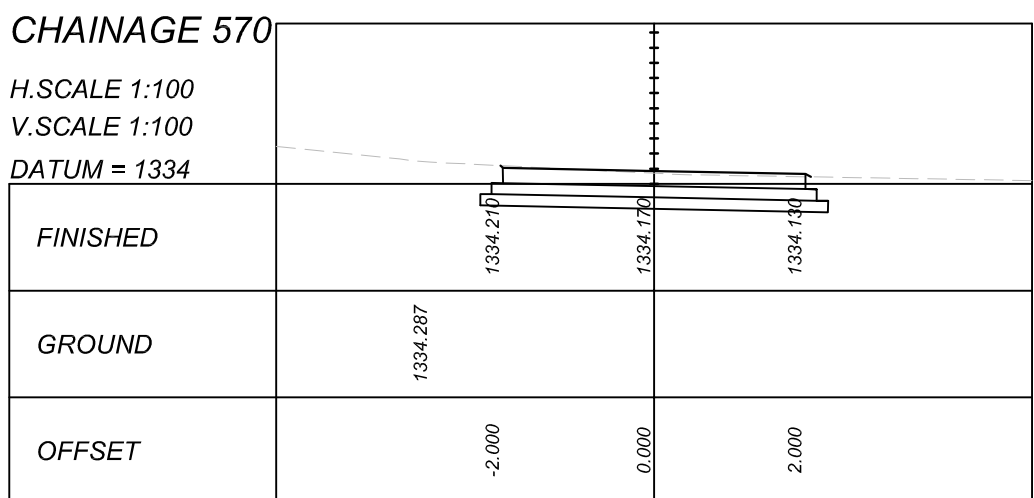
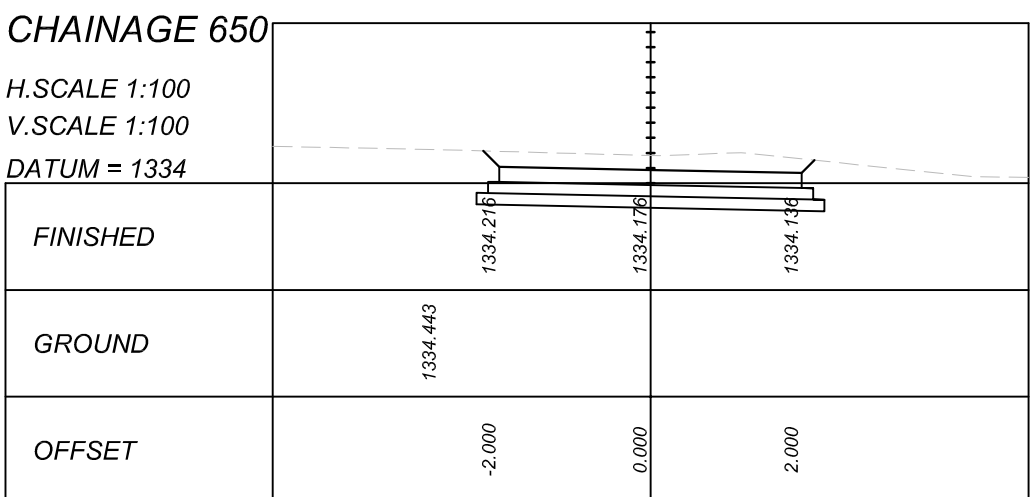
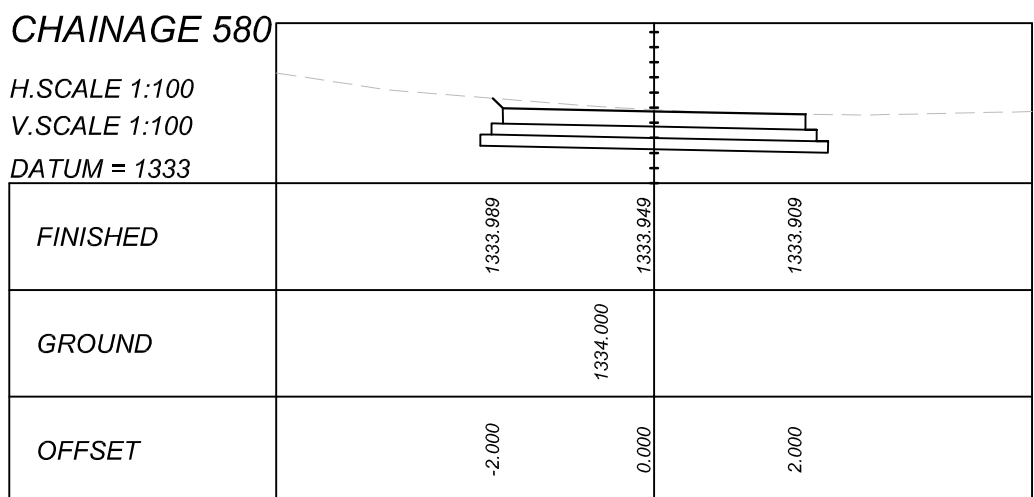
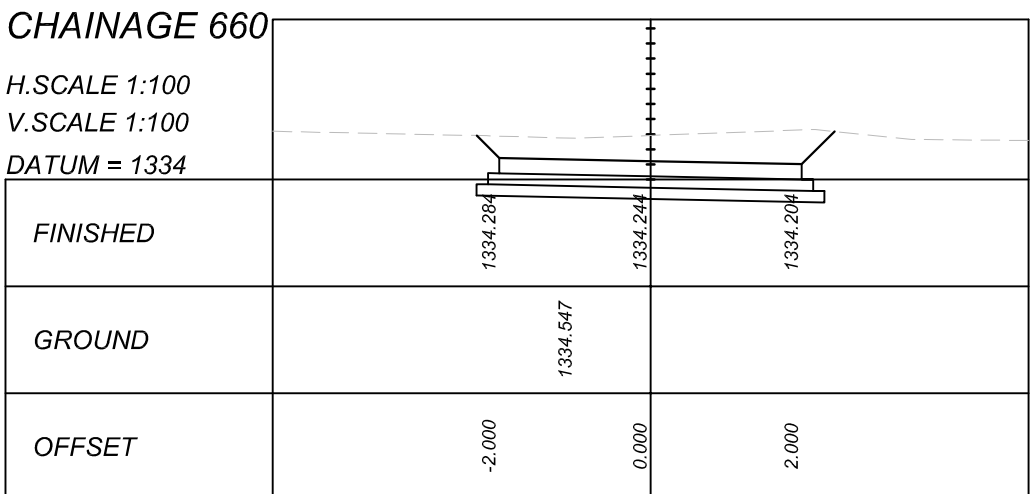
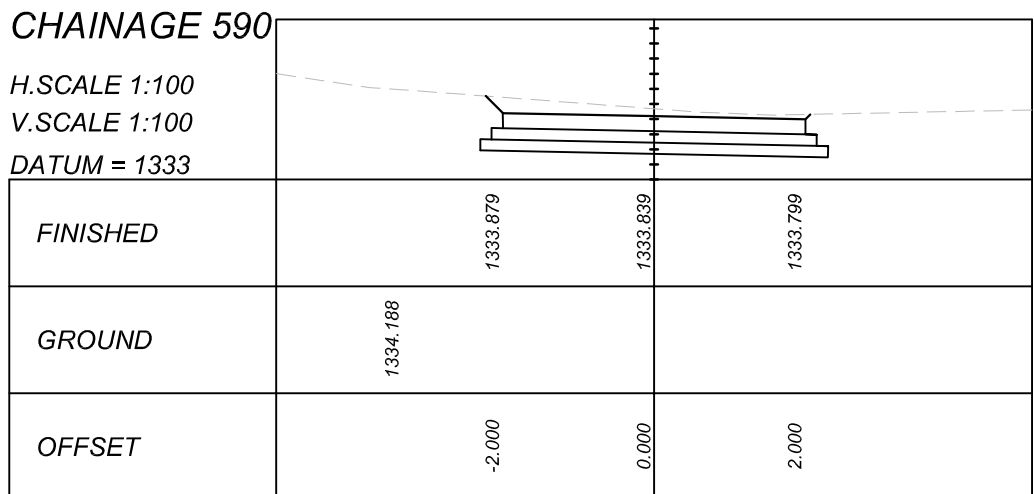
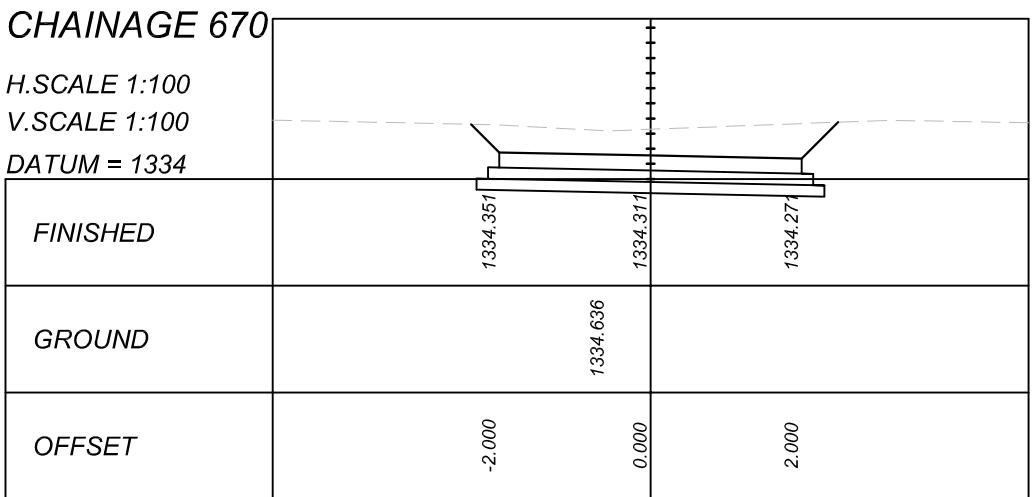
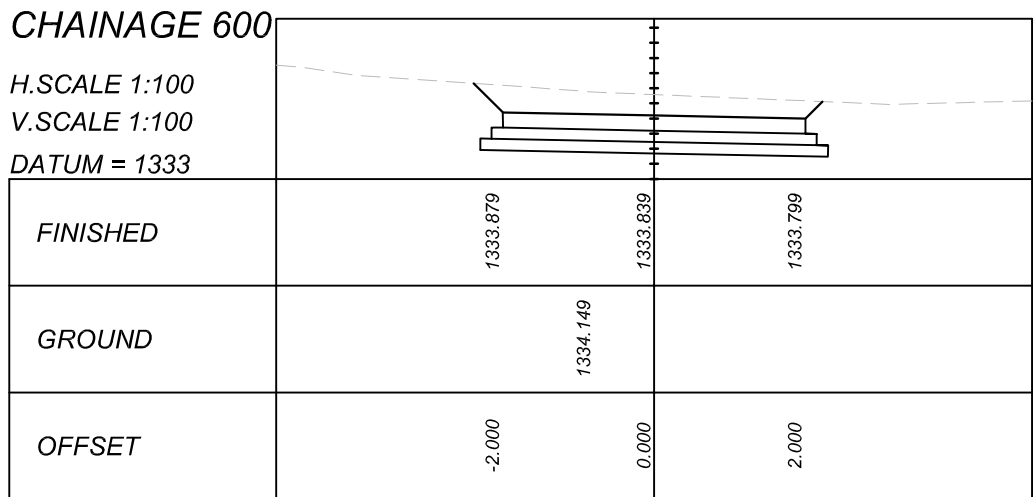
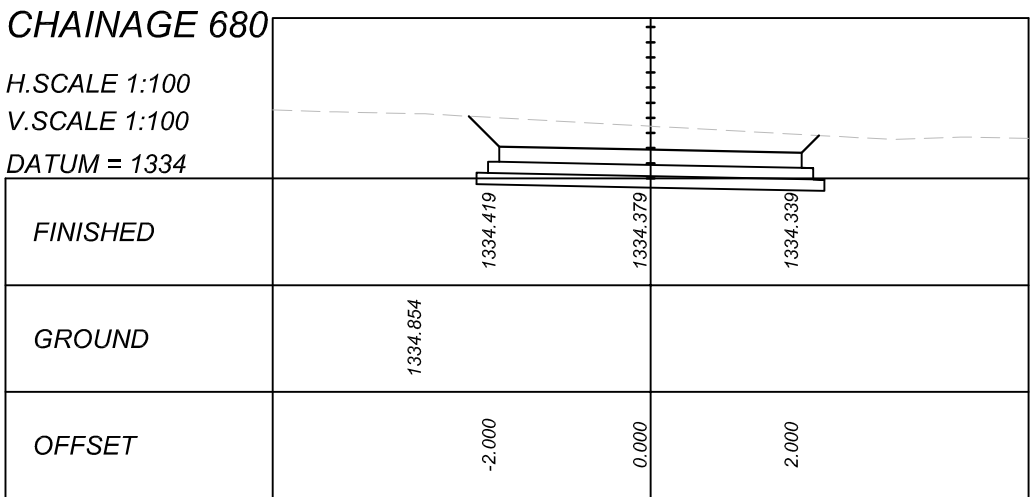
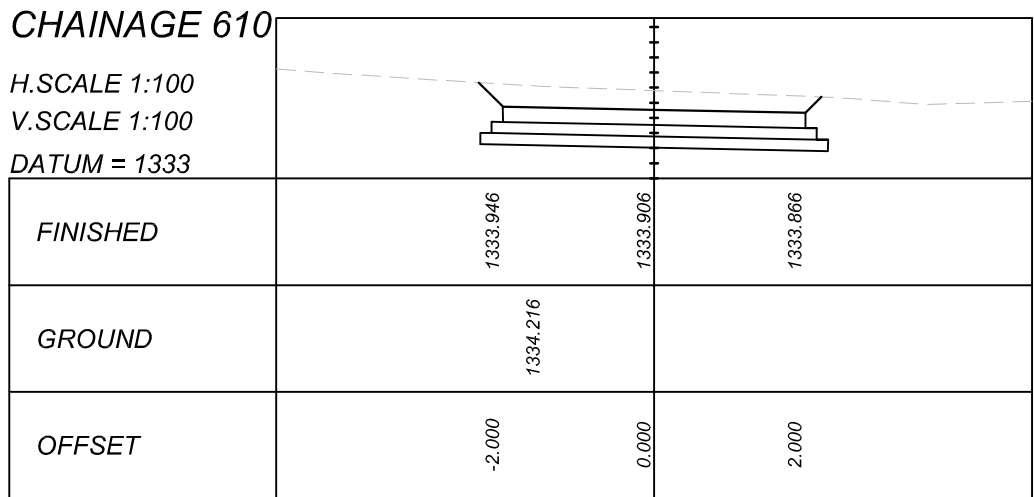
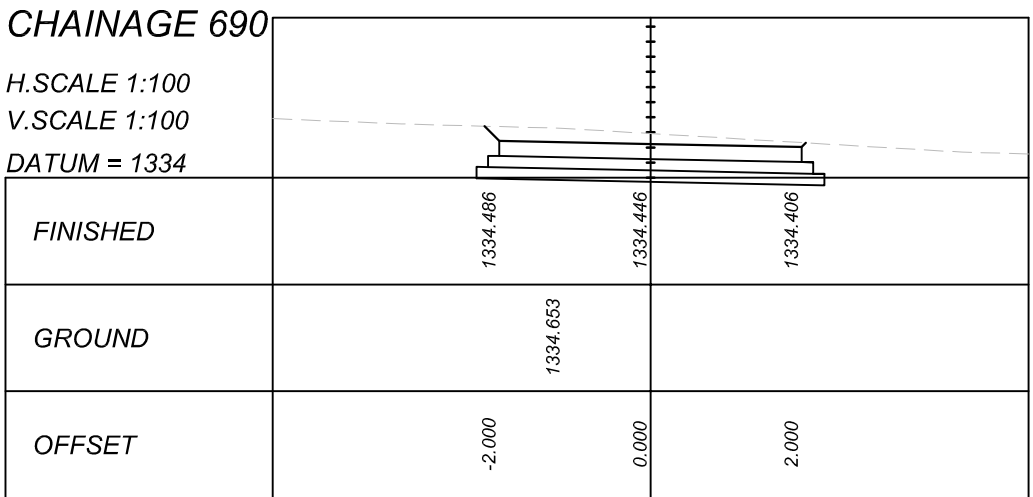
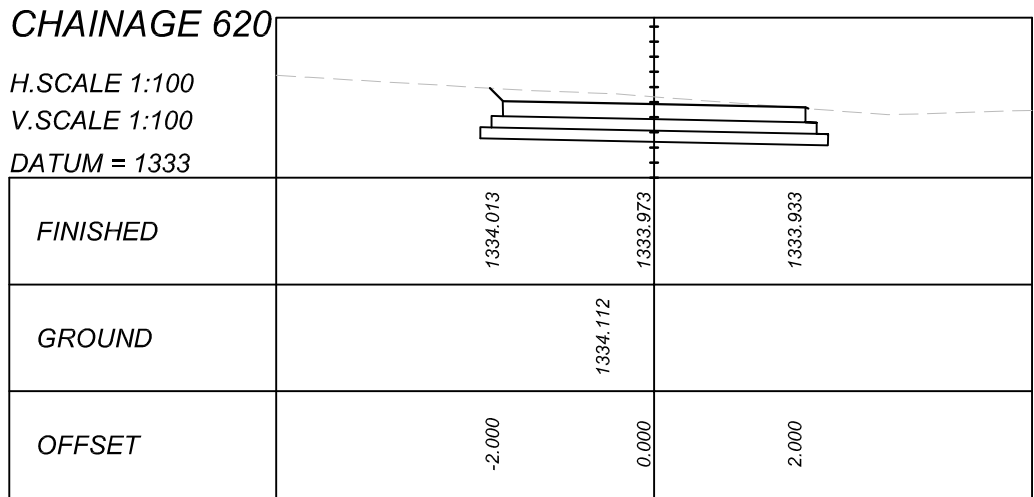
INSPECTOR OF WORKS of COT:

NAME SIGNATURE

DATE

GENERAL

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CITY OF TSHWANE
SERVICES INFRASTRUCTURE
DEPARTMENT
WATER AND SANITATION
MR DUMISANE GUBUZA
DIVISIONAL HEAD

SIGNATURE _____ Prof. Reg. No. _____ DATE _____

AMENDMENTS

NR	DATE	APPROVED	DESCRIPTION	PAR
1	10-06-2025	Z.D RANTA	FIRST ISSUE FOR APPROVAL	

WATER AND SANITATION

FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE

DIRECTOR: INFRASTRUCTURE DESIGN			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: WATER DISTRIBUTION			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: BULK WATER SERVICES			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: WATER & SANITATION: PLANNING & REGULATION			
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DIRECTOR: WASTE WATER COLLECTION			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: WASTE WATER TREATMENT			
NAME	Prof. Reg. No	SIGNATURE	DATE

CONSULTANT DETAIL



DPT CIVIL AND STRUCTURAL JV
POSTNET SUITE 453
SINOVILLE CORNER
PRIVATE BAG X504
SINOVILLE
012 25
TEL: 012 567 7381
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I, Z.D RANTA Prof. Reg. No. 201170066
HEREBY CERTIFY THAT THE SERVICES WILL HAVE BEEN INSTALLED
ACCORDING TO NOTE 9 OF THE ABOVE NOTES AND TO THE DRAWING
SIGNATURE _____ DATE _____
CONSULTANT DRAWING NUMBER _____

DESIGNED

NAME: Z.D RANTA Prof. Reg. No. 201170066
SIGNATURE: _____ DATE: _____

DRAWN

NAME: K. MOLEMA
SIGNATURE: _____ DATE: _____

CHECKED

NAME: Z.D RANTA Prof. Reg. No. 201170066
SIGNATURE: _____ DATE: _____

INFORMATION OFFICE CHECKED

NAME: _____ DATE: _____

DESIGN OFFICE APPROVAL

NAME: Z.D RANTA Prof. Reg. No. 201170066
SIGNATURE: _____ DATE: _____

CONTRACT No. _____

PROJECT No. _____

SHEET No. 3 of 3

PAPER SIZE A0

SCALE 1:1000

DATE: JUNE 2025

LOCATION OF PROJECT

BOOYSENS EXTENSION 4

DESCRIPTION OF PROJECT:

HORNSNEK RESERVOIR
ACCESS ROAD - CROSS SECTIONS

WBS No. _____

COT DRAWING NUMBER _____

PROJECT STATUS

CONCEPT DRAWING TENDER DRAWING APPROVED CONSTRUCTION DRAWING AS BUILT DRAWING

PROJECT ENGINEER of COT:

NAME SIGNATURE
Prof. Reg. No. DATE

INSPECTOR OF WORKS of COT:

NAME SIGNATURE
DATE

NOTES AND SPECIFICATIONS

GENERAL

ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.

ALL DIMENSIONS ARE IN MILLIMETERS. (UNLESS OTHERWISE SPECIFIED)

DO NOT SCALE FROM THESE DRAWINGS.

ALL DIMENSIONS MUST 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 CTMM DETAIL DRAWINGS

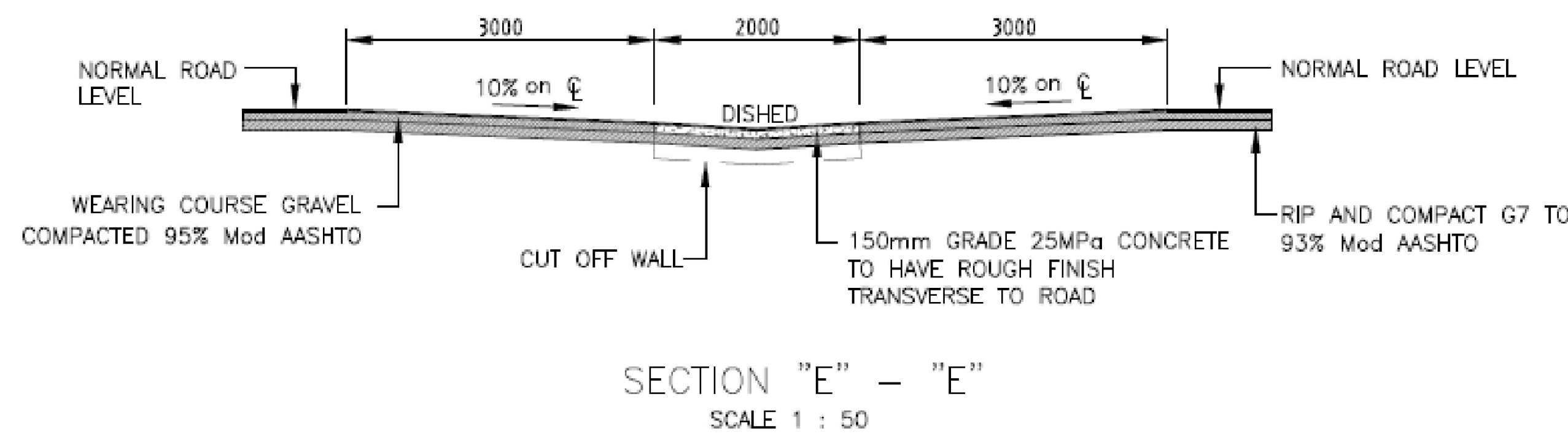
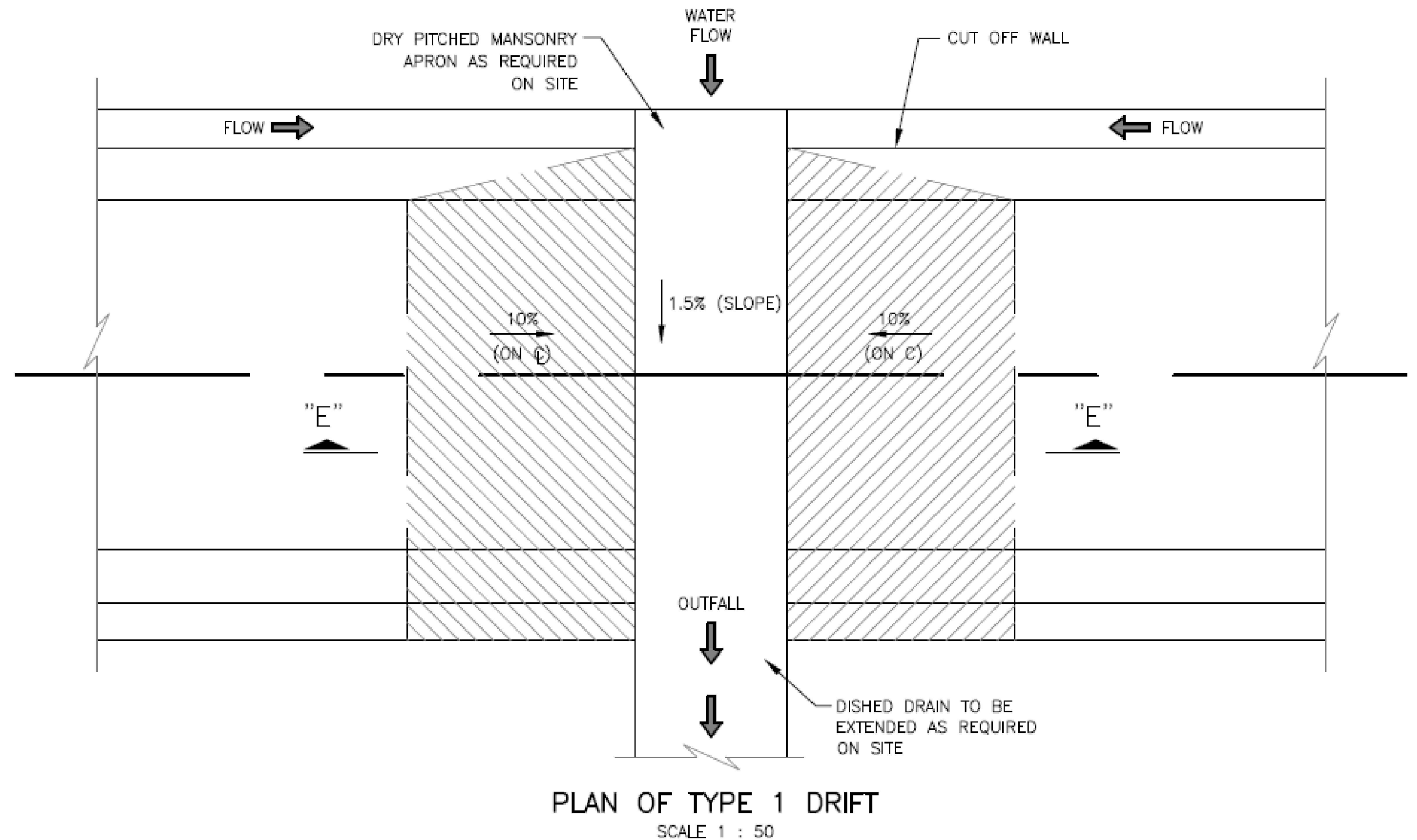
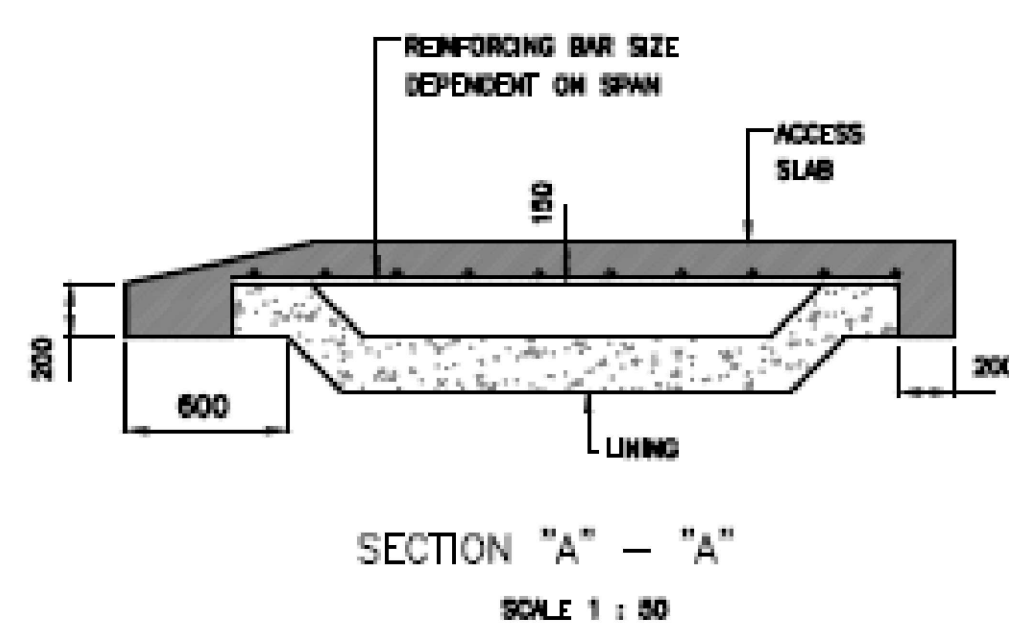
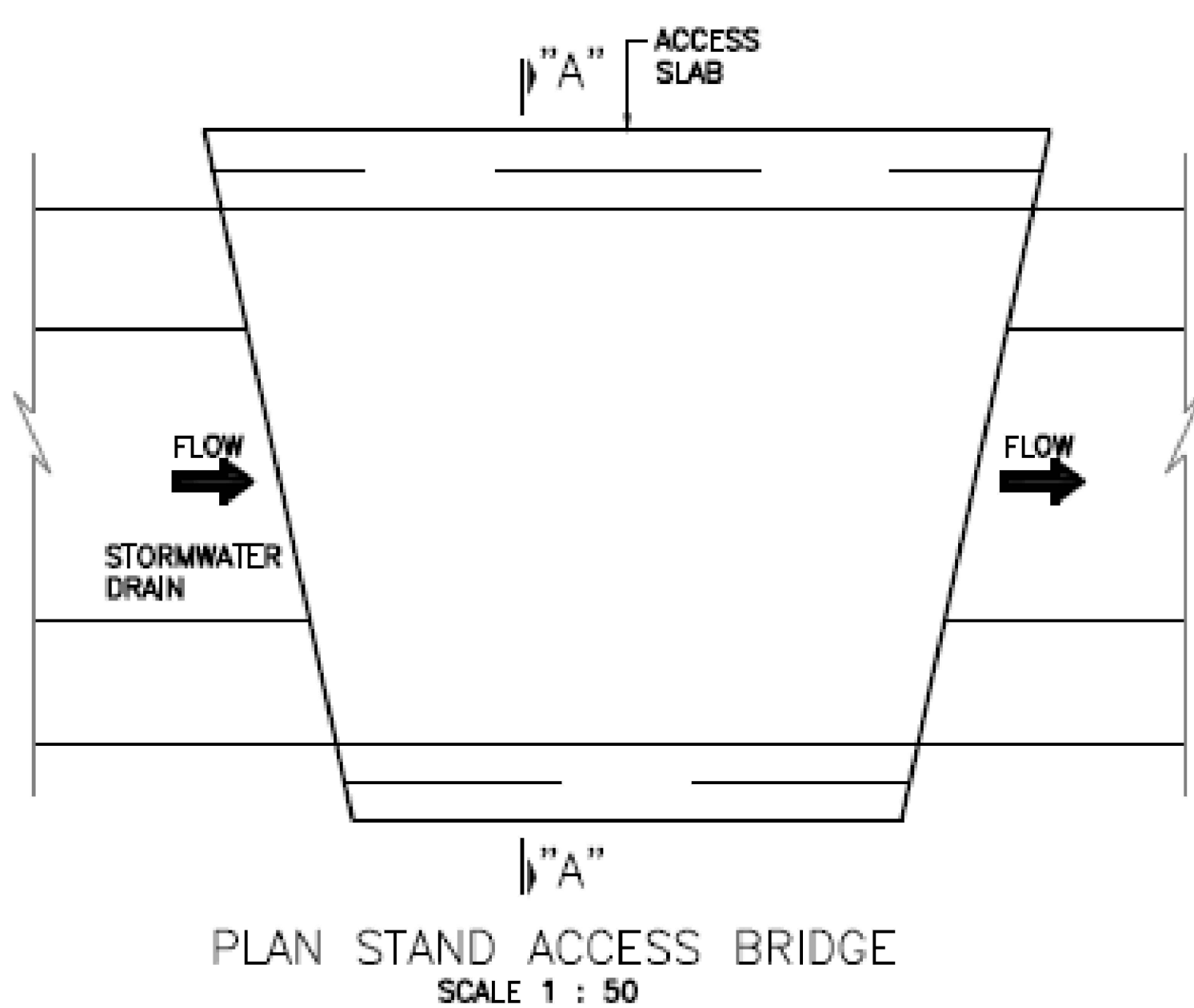
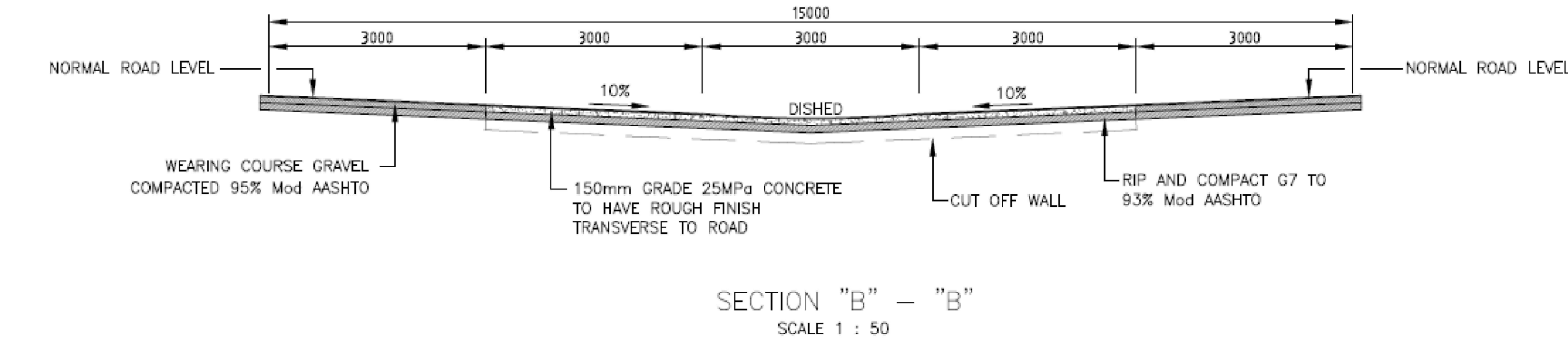
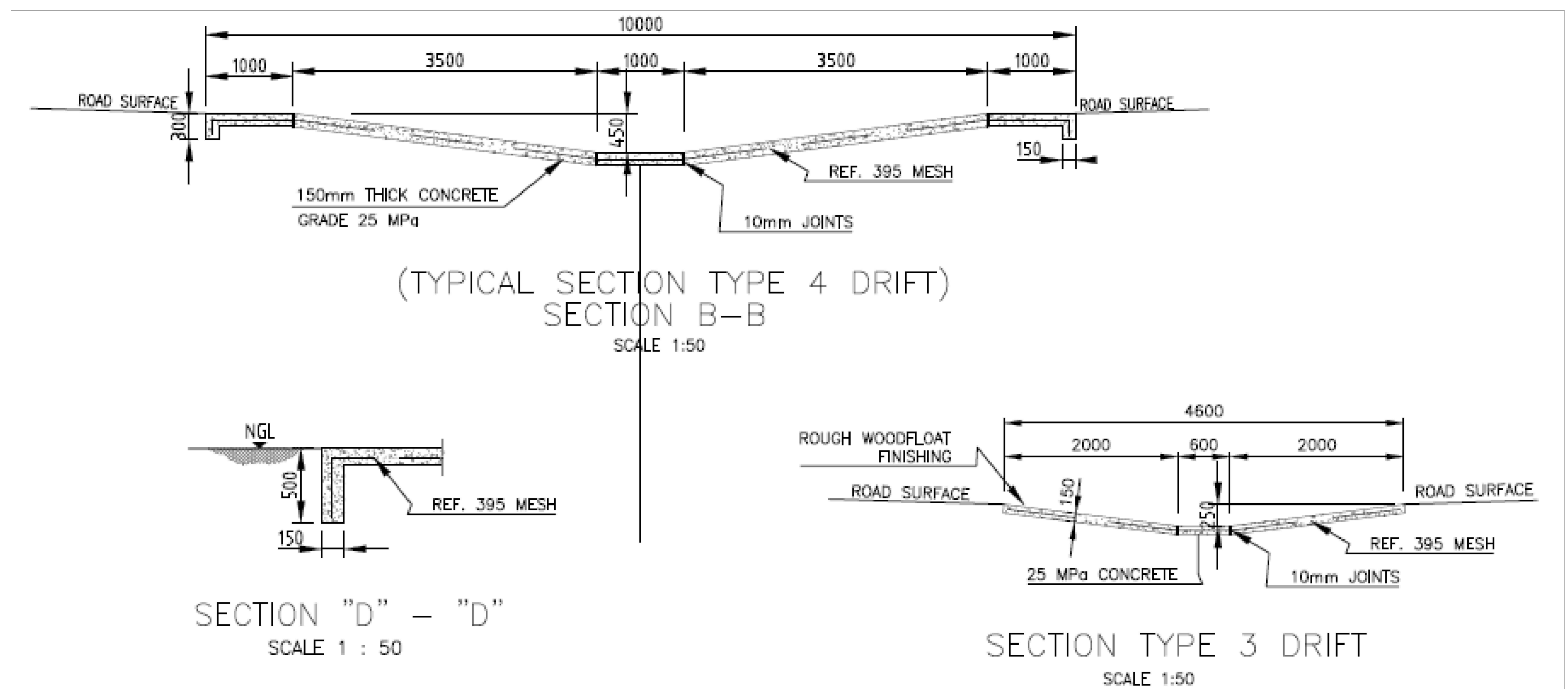
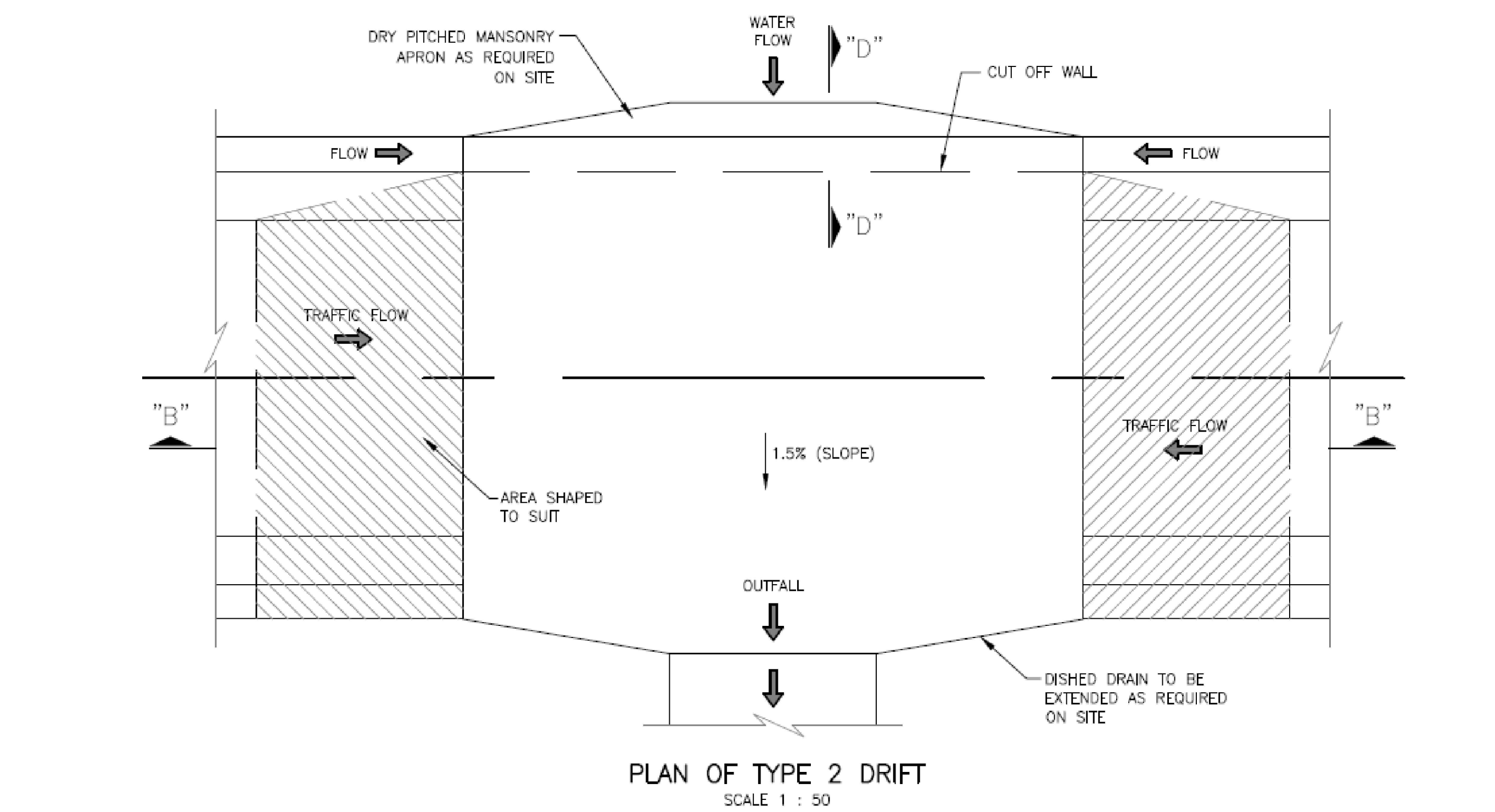
THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTS DRAWINGS. (IF APPLICABLE)

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 MANAGER OF THE TRANSPORT AND ROADS 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 TRANSPORT AND ROADS DEPARTMENT HAVE BEEN MET AND ARE COMPLIED WITH.

FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.



CITY OF TSHWANE
SERVICES INFRASTRUCTURE
DEPARTMENT
WATER AND SANITATION
MR DUMISANE GUBUZA
DIVISIONAL HEAD

SIGNATURE _____ Prof. Reg. No. _____ DATE _____

AMENDMENTS

NR	DATE	APPROVED	DESCRIPTION	PAR
1	10-06-2025	Z.D RANTA	FIRST ISSUE FOR APPROVAL	

WATER AND SANITATION

FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE

NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: INFRASTRUCTURE PROVISION			
DIRECTOR: WATER DISTRIBUTION			
DIRECTOR: BULK WATER SERVICES			
DIRECTOR: WATER & SANITATION: PLANNING & REGULATION			
DIRECTOR: WASTE WATER COLLECTION			
DIRECTOR: WASTE WATER TREATMENT			

CONSULTANT DETAIL



DPT CIVIL AND STRUCTURAL JV
POSTNET SUITE 453
SINOVILLE CORNER
PRIVATE BAG X504
SINOVILLE
0129
TEL: 012 567 7381
FAX: 012 567 1996
E-MAIL: info@dtshwamega.co.za

I, Z.D RANTA Prof. Reg. No. 201170066
HEREBY CERTIFY THAT THE SERVICES WILL HAVE BEEN INSTALLED
ACCORDING TO NOTE 9 OF THE ABOVE NOTES AND TO THE DRAWING

SIGNATURE _____ DATE _____

CONSULTANT DRAWING NUMBER _____

DESIGNED

NAME: Z.D RANTA Prof. Reg. No. 201170066
SIGNATURE: _____ DATE: _____

NAME: K. MOLEMA
SIGNATURE: _____ DATE: _____

NAME: Z.D RANTA Prof. Reg. No. 201170066
SIGNATURE: _____ DATE: _____

NAME: _____
SIGNATURE: _____ DATE: _____

NAME: Z.D RANTA Prof. Reg. No. 201170066
SIGNATURE: _____ DATE: _____

DRAWN

CHECKED

INFORMATION OFFICE CHECKED

DESIGN OFFICE APPROVAL

CONTRACT

No. _____

PROJECT No.

.....DPT.....C0001.....

SHEET No.

1 of 1

PAPER SIZE

A0

SCALE

1:1000

DATE

JUNE 2025

LOCATION OF PROJECT

BOOYSENS EXTENSION 4

DESCRIPTION OF PROJECT:

HORNSNEK LL RESERVOIR
ACCESS ROAD - DRIFT DETAILS

WBS No.

.....

COT DRAWING NUMBER

.....

PROJECT STATUS

CONCEPT DRAWING
TENDER DRAWING
APPROVED CONSTRUCTION DRAWING
AS BUILT DRAWING

PROJECT ENGINEER of COT:

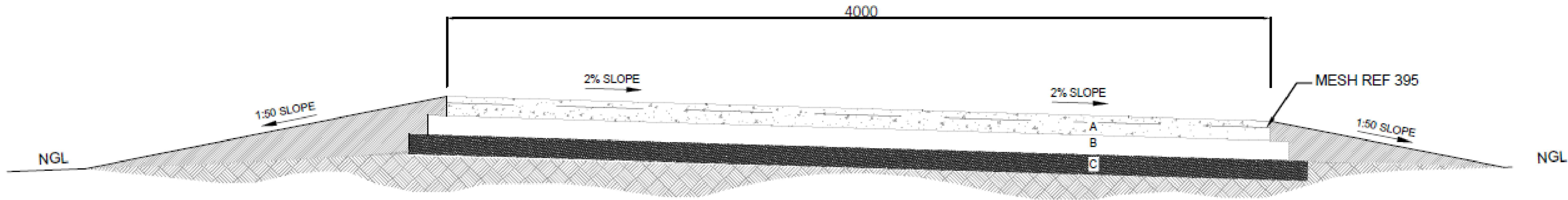
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Prof Reg No. _____ DATE _____

INSPECTOR OF WORKS of COT:

NAME _____ SIGNATURE _____
DATE _____

GENERAL



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10. FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.



TYPICAL ROAD CROSS SECTION

SCALE : NTS

CONCRETE PAVEMENT LIST	
A	200 mm CONCRETE PAVEMENT
B	150 mm C4 STABILISED SUB-BASE AT 95% MOD AASHTO
C	150 mm G9 IN-SITU ROAD BED MATERIAL AT 90% MOD AASHTO

<div><p>CITY OF TSHWANE SERVICES INFRASTRUCTURE DEPARTMENT WATER AND SANITATION MR DUMISANE GUBUZA DIVISIONAL HEAD</p><p>SIGNATURE _____ Prof. Reg. No. _____ DATE _____</p></div>	AMENDMENTS				WATER AND SANITATION FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE				<div><p>DPT CIVIL AND STRUCTURAL JV POSTNET SUITE 453 SINOVILLE CORNER PRIVATE BAG X504 SINOVILLE 0129 TEL: 012 567 7381 FAX: 012 567 1996 E-MAIL: info@dtshwamega.co.za</p></div> <p>I, Z.D. RANTA Prof. Reg. Nr. 201170066 HEREBY CERTIFY THAT THE SERVICES WILL HAVE BEEN INSTALLED ACCORDING TO NOTE 9 OF THE ABOVE NOTES AND TO THE DRAWING</p> <p>SIGNATURE _____ DATE _____</p> <p>CONSULTANT DRAWING NUMBER _____</p>		DESIGNED NAME: Z.D. RANTA Prof. Reg. No: 201170066 SIGNATURE: _____ DATE: _____		CONTRACT No. _____ PROJECT No. DPT - C0001 SHEET No. 1 of 1 PAPER SIZE A0 SCALE 1:1000 DATE: JUNE 2025	LOCATION OF PROJECT BOOYSENS EXTENSION 4		PROJECT STATUS																																																																																																				
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GENERAL CONSTRUCTION NOTES: RESERVOIRS

CONCRETE:

CONCRETE STRENGTH OF ALL CONCRETE ELEMENTS SHALL BE AS FOLLOWS:

BLINDING = 15MPa
SITE PLACED (INFILL) = 25MPa
BASES (REINFORCED & UNREINFORCED) = 35MPa
FLOORS = 35MPa
COLUMNS = 50MPa
BEAMS = 50MPa
SLABS = 60MPa
WALLS = 60MPa

CONCRETE COVER TO MAIN STEEL REINFORCING ARE AS FOLLOWS:

- 1 FLOORS - AS PER DETAILS
- 2 COLUMNS - 40mm
- 3 BASES - 50mm
- 4 BEAMS - 40mm
- 5 SLABS - 40mm

CURING OF CONCRETE SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH SABS 1200G.

ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF SABS 1200G.

STRIPPING TIMES OF SHUTTERING AND PROPPING SHALL BE IN ACCORDANCE WITH SABS 1200G.

ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER IN WRITING FOR HIS APPROVAL

THE STRENGTH OF CONCRETE COVER BLOCKS SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FIXING METHOD OF COVER BLOCKS MUST BE APPROVED BY THE ENGINEER.

SHUTTERING SHALL BE FREE FROM SHAVINGS, DUST, DIRT, PIECES OF WIRE ETC. BEFORE CASTING OF CONCRETE.

THE CONTRACTOR MUST TAKE THE NECESSARY MEASURES TO PREVENT CARDBOARD SHUTTERING FROM FLOATING OR MOVEMENT DURING CASTING OF CONCRETE .

PROPPING FOR BEAMS AND ELEVATED SLABS SHALL REMAIN IN POSITION UNTIL THE MIN. SPECIFIED TIME HAS EXPIRED AFTER THE CASTING OF ANY UPSTAND ELEMENTS.

A 25×25mm CHAMFER SHALL BE PROVIDED ON ALL CORNERS OF OFF-SHUTTER CONCRETE.

STRUCTURAL DRAWINGS MUST BE READ IN CONJUNCTION WITH MAIN CONSULTANT DRAWINGS AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

ALL COLUMNS ARE SYMMETRICAL ABOUT GRIDLINES UNLESS OTHERWISE INDICATED.

REINFORCEMENT:

ALL REINFORCEMENT SHALL BE INSPECTED AND APPROVED IN WRITING BY THE ENGINEER BEFORE CASTING OF CONCRETE MAY COMMENCE.

THE CONTRACTOR SHALL GIVE AT LEAST 24 HOURS NOTICE TO THE ENGINEER FOR STEEL INSPECTIONS THAT ARE REQUIRED.

BENDING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH SABS 82.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN REINFORCEMENT IN ITS CORRECT POSITION DURING CASTING OF CONCRETE.

ALL REINFORCING ON SITE SHALL BE STORED AND ON TIMBER POLES OR PLANKS (NOT ON THE GROUND) TO PROTECT REINFORCING FROM MUD AND DIRT. REINFORCING MUST BE STORED IN SUCH A MANNER THAT NO PERSONS OR VEHICLES SHALL DAMAGE IT.

CONTRACTOR SHALL INSPECT THE REINFORCING HIM/HERSELF AND CHECK THAT ALL STEEL IS IN PLACE AND CORRECT BEFORE CONTACTING THE ENGINEER FOR INSPECTIONS.

MINIMUM LAP LENGTHS FOR REINFORCING SHALL BE AS FOLLOWS:

- 1. Y10 BARS = 400mm
- 2. Y12 BARS = 500mm
- 3. Y16 BARS = 650mm
- 4. Y20 BARS = 800mm
- 5. Y25 BARS = 1000mm
- 6. Y32 BARS = 1300mm
- 7. Y40 BARS = 1600mm

REINFORCEMENT SHALL BE FIXED TO COMPLY WITH THE TOLERANCES AS SPECIFIED IN SABS 1200G.

NO HEAT TREATMENT OR CUTTING OF STEEL WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER SHALL BE ALLOWED.

BEND-OUT BARS SHALL BE BENT OUT WITH A SUITABLE PIPE TO THE CORRECT POSITION. NO KINK IN BEND-OUT BARS WILL BE ALLOWED.

STRUCTURAL STEELWORK

ALL STRUCTURAL STEELWORK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH SABS 1200H.

WELDS SHALL CONFORM TO SABS 0167-1984 AND 044 SPECS.

ALL DIMENSIONS SHALL BE CHECKED ON SITE BEFORE SHOP DRAWINGS COMMENCE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

A FULL SET OF SHOP DRAWINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE ANY MANUFACTURING MAY COMMENCE

ALL STRUCTURAL STEELWORK SHALL BE GRADE 350W.

ALL STRUCTURAL STEEL ON SITE SHALL BE STORED AND HANDLED SO THAT IT IS NOT SUBJECTED TO DAMAGE OR EXCESSIVE STRESS AND MUST BE KEPT CLEAN.

CORROSION PROTECTION OF STRUCTURAL STEEL

ALL CORROSION PROTECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS OF SABS HC - 1988.

PRIOR TO ANY FORM OF PREPARATION, ALL HARMFULL DEPOSITS ON THE SURFACE OF THE STEELWORK, SUCH AS OIL, GREASE, CHEMICAL DEPOSITS, CLAY, BITUMEN OR MUD, SHALL BE REMOVED.

WHERE STAINLESS STEEL IS SPECIFIED, IT IS TO BE GRADE 304. ALL OTHER STRUCTURAL STEEL TO BE HOT DIP GALVANIZED TO SANS 121 AND SANS 32.

REPAIR TO CONCRETE ELEMENTS









THE REPAIR OF CONCRETE DUE TO HONEYCOMBING OR OTHER SUCH DEFECTS:

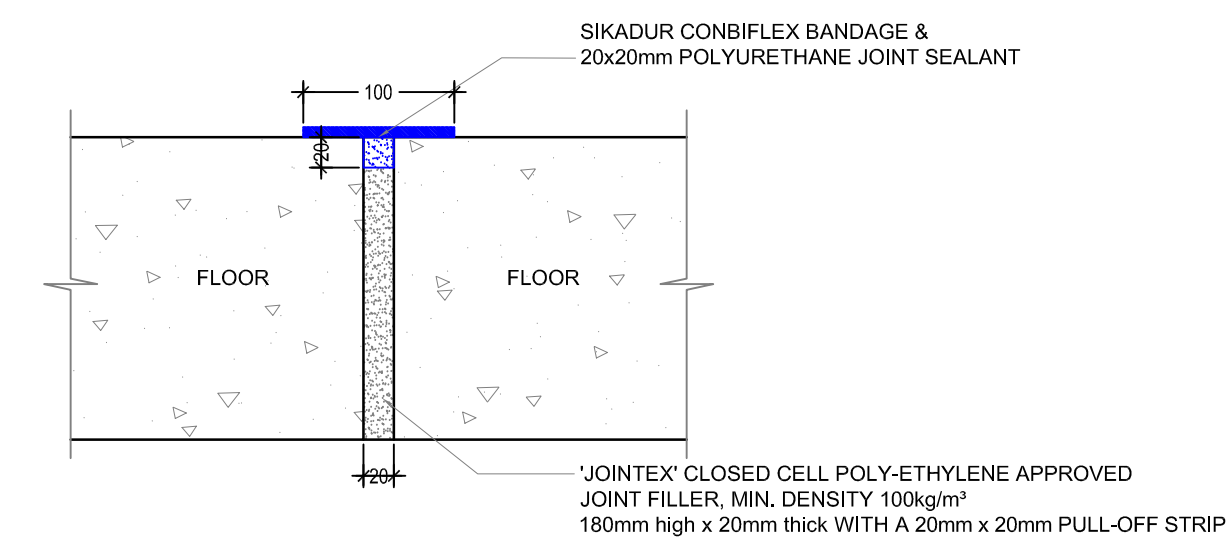
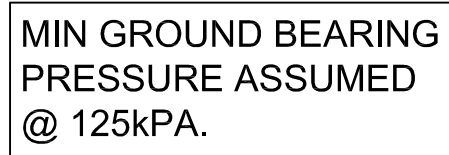
- 1. EPIDERMIX 344, WET/DRY CONCRETE ADHESIVE APPLIED TO EXPOSED/CHIPPED CONCRETE SURFACE.
- 2. DURAGROUT 1000, NON SHRINK CEMENTITIOUS GROUT APPLIED ONTO THE EPOXY SURFACE

NOTES AND SPECIFICATIONS

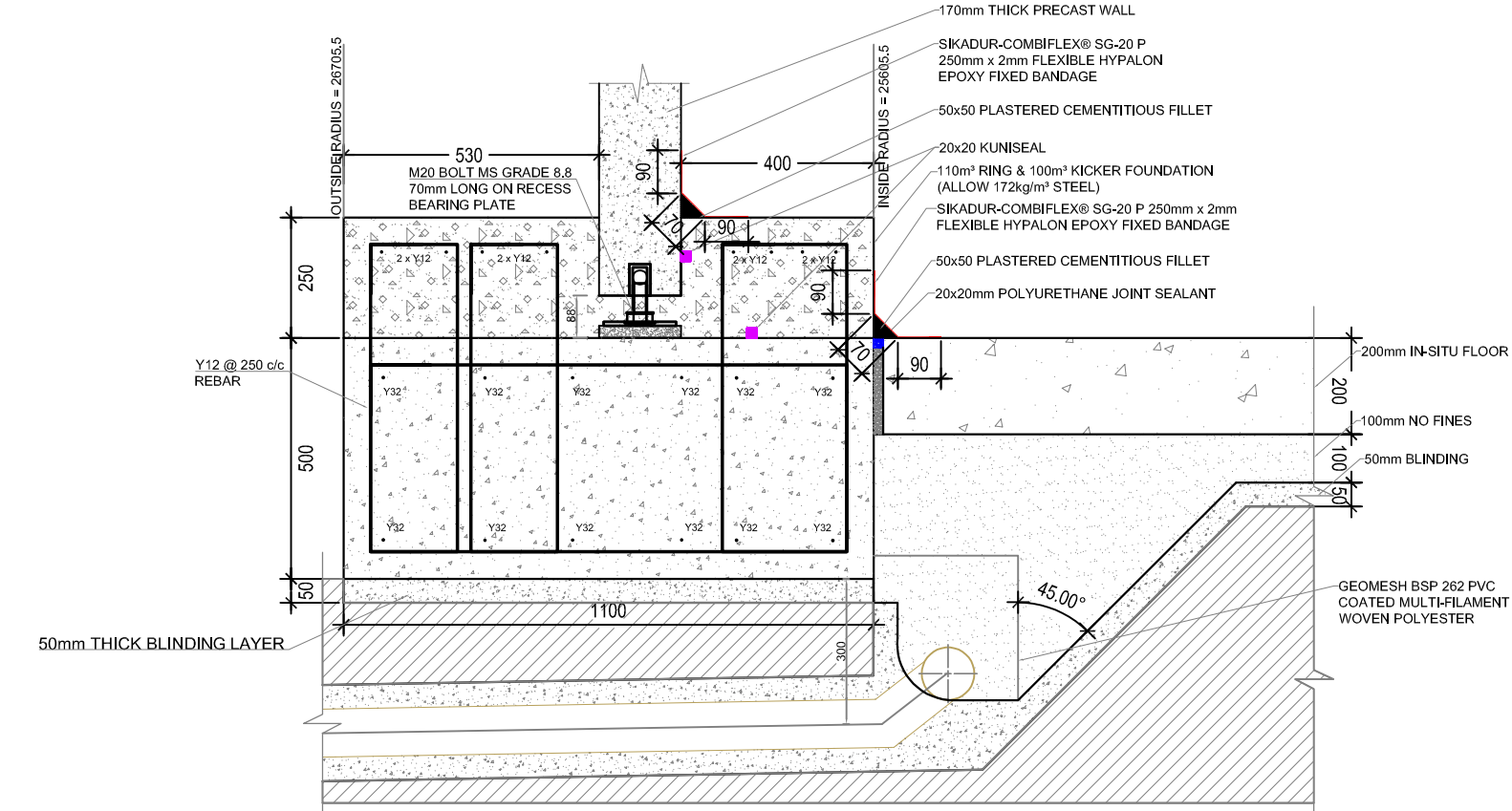
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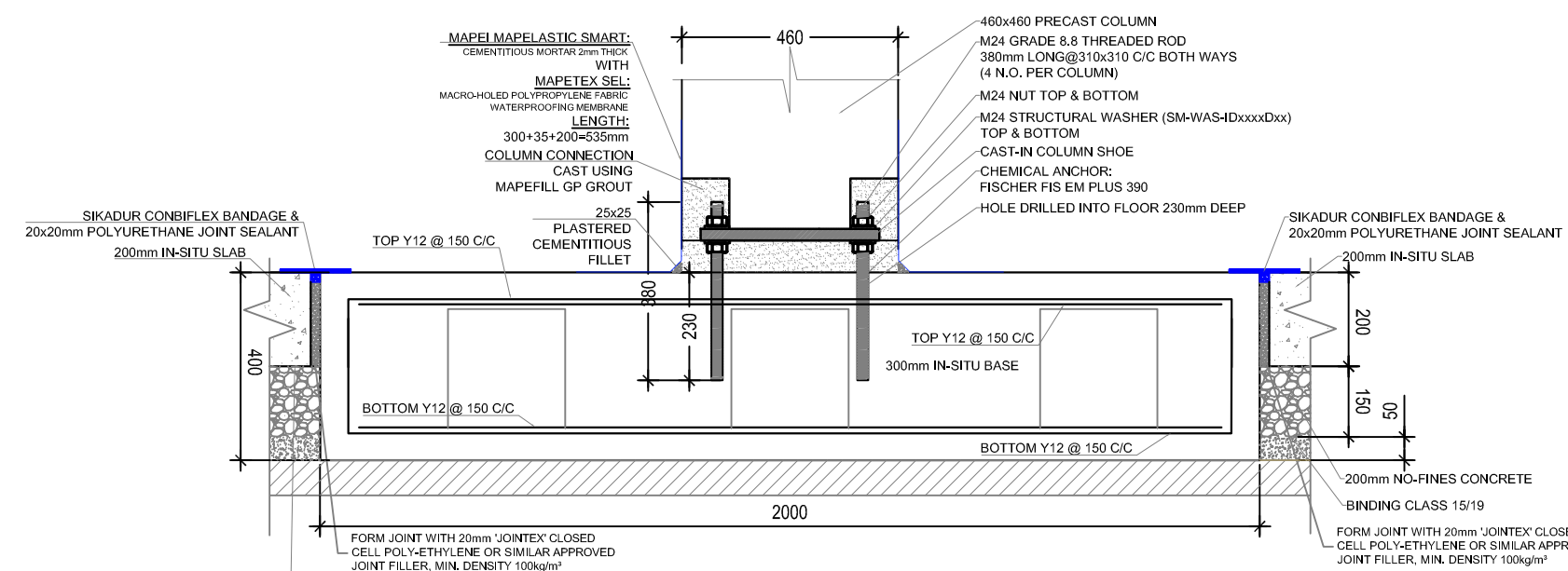
<div><p>CITY OF TSHWANE SERVICES INFRASTRUCTURE DEPARTMENT WATER AND SANITATION</p><p>MR DUMISANE GUBUZA DIVISIONAL HEAD</p></div> <div>SIGNATURE _____ Prof. Reg. No. _____ DATE _____</div>	<div>AMENDMENTS</div> <table><thead><tr><th>NR</th><th>DATE</th><th>APPROVED</th><th>DESCRIPTION</th><th>PAR</th></tr></thead><tbody><tr><td>1</td><td>10-07-2025</td><td>Z.D.RANTA</td><td>FIRST ISSUE FOR APPROVAL</td><td></td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>				NR	DATE	APPROVED	DESCRIPTION	PAR	1	10-07-2025	Z.D.RANTA	FIRST ISSUE FOR APPROVAL																																										<div>WATER AND SANITATION</div> <div>FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE</div> <table><thead><tr><th>NAME</th><th>Prof. Reg. No</th><th>SIGNATURE</th><th>DATE</th></tr></thead><tbody><tr><td colspan="4">DIRECTOR: INFRASTRUCTURE PROVISION</td></tr><tr><td colspan="4">DIRECTOR: WATER DISTRIBUTION</td></tr><tr><td>NAME</td><td>Prof. Reg. No</td><td>SIGNATURE</td><td>DATE</td></tr><tr><td colspan="4">DIRECTOR: BULK WATER SERVICES</td></tr><tr><td>NAME</td><td>Prof. Reg. No</td><td>SIGNATURE</td><td>DATE</td></tr><tr><td colspan="4">DIRECTOR: WATER & SANITATION: PLANNING & REGULATION</td></tr><tr><td>NAME</td><td>Prof. Reg. No</td><td>SIGNATURE</td><td>DATE</td></tr><tr><td colspan="4">DIRECTOR: WASTE WATER COLLECTION</td></tr><tr><td>NAME</td><td>Prof. Reg. No</td><td>SIGNATURE</td><td>DATE</td></tr><tr><td colspan="4">DIRECTOR: WASTE WATER TREATMENT</td></tr><tr><td>NAME</td><td>Prof. Reg. No</td><td>SIGNATURE</td><td>DATE</td></tr></tbody></table>				NAME	Prof. Reg. No	SIGNATURE	DATE	DIRECTOR: INFRASTRUCTURE PROVISION				DIRECTOR: WATER DISTRIBUTION				NAME	Prof. Reg. No	SIGNATURE	DATE	DIRECTOR: BULK WATER SERVICES				NAME	Prof. Reg. No	SIGNATURE	DATE	DIRECTOR: WATER & SANITATION: PLANNING & REGULATION				NAME	Prof. Reg. No	SIGNATURE	DATE	DIRECTOR: WASTE WATER COLLECTION				NAME	Prof. Reg. No	SIGNATURE	DATE	DIRECTOR: WASTE WATER TREATMENT				NAME	Prof. Reg. No	SIGNATURE	DATE	<div>CONSULTANT DETAIL</div> <div><p>DPT CIVIL AND STRUCTURAL JV POSTNET SUITE 453 SINOVILLE CONER PRIVATE BAG X504 SINOVILLE 0129 TEL: 012 567 7381 FAX: 012 567 1996 E-MAIL: info@dtshimaga.co.za</p></div> <div>I, Z.D.RANTA Prof Reg Nr. 201170066 HEREBY CERTIFY THAT THE SERVICES WILL HAVE BEEN INSTALLED ACCORDING TO NOTE 9 OF THE ABOVE NOTES AND TO THE DRAWING SIGNATURE _____ DATE _____</div> <div>CONSULTANT DRAWING NUMBER _____</div> <div></div>		<div>DESIGNED</div> <div>NAME: Z.D.RANTA Prof Reg No. 201170066 SIGNATURE: _____ DATE: _____</div> <div>DRAWN</div> <div>NAME: K. MOLEMA SIGNATURE: _____ DATE: _____</div> <div>CHECKED</div> <div>NAME: Z.D.RANTA Prof Reg No. 201170066 SIGNATURE: _____ DATE: _____</div> <div>INFORMATION OFFICE CHECKED</div> <div>NAME: _____ DATE: _____</div> <div>DESIGN OFFICE APPROVAL</div> <div>NAME: Z.D.RANTA Prof Reg No. 201170066 SIGNATURE: _____ DATE: _____</div>		<div>CONTRACT No. _____</div> <div>PROJECT No. _____</div> <div>SHEET No. _____</div> <div>PAPER SIZE _____ A0 _____</div> <div>SCALE _____</div> <div>DATE: _____ 10-07-2025 _____</div>	<div>LOCATION OF PROJECT</div> <div>BOOYSENS EXTENSION 4</div> <div>DESCRIPTION OF PROJECT:</div> <div>HORNSNEK LL RESERVOIR GENERAL NOTES</div> <div>WBS No. _____</div> <div>COT DRAWING NUMBER _____</div> <div></div>		<div>PROJECT STATUS</div> <div><div> CONCEPT DRAWING</div><div> TENDER DRAWING</div><div> APPROVED CONSTRUCTION DRAWING</div><div> AS BUILT DRAWING</div></div> <div>PROJECT ENGINEER of COT:</div> <div>NAME _____ SIGNATURE _____</div> <div>Prof Reg No. _____ DATE _____</div> <div>INSPECTOR OF WORKS of COT:</div> <div>NAME _____ SIGNATURE _____</div> <div>DATE _____</div>	
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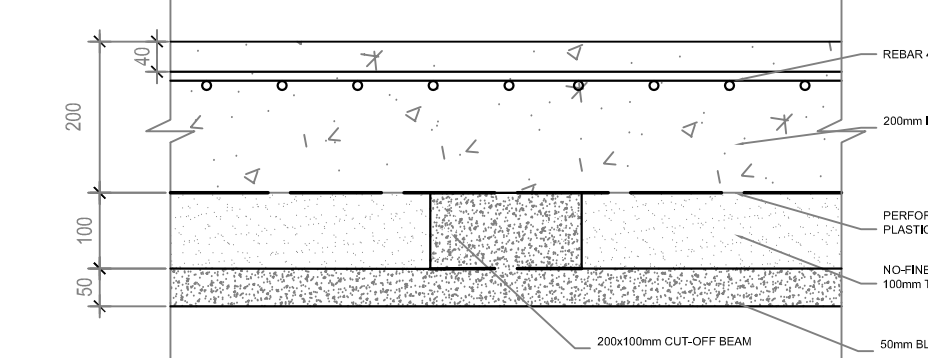
SECTION JT
TYPICAL FLOOR JOINT DETAIL
1:5



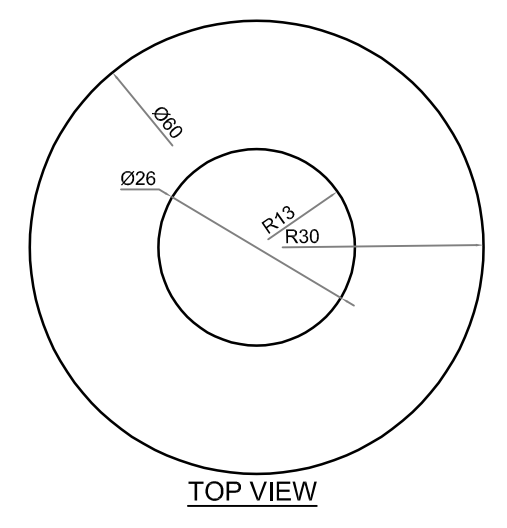
SECTION RF
TYPICAL RING-FOUNDATION DETAIL
Scale 1:15



SECTION BA
TYPICAL BASE DESIGN
Scale 1:15



SECTION CB
TYPICAL CUT OF BEAM DETAIL
1:10



60
SIDE VIEW
WASHER DETAIL
BOTTOM
1:1

<u>BOTTOM CONNECTION</u>	
<u>DESCRIPTION</u>	<u>NO.</u>
M24 MS GRADE 8.8 STEEL NUT	288
M24 MS GRADE 8.8 STEEL WASHER, 26ID:60OD:5mm	288
M24 MS GRADE 8.8 THREADED ROD 380mm LONG	144

REVISION

WATER AND SANITATION			
FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE			
DIRECTOR: INFRASTRUCTURE PROVISION			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: WATER DISTRIBUTION			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: BULK WATER SERVICES			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: WATER & SANITATION: PLANNING & REGULATION			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: WASTE WATER COLLECTION			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: WASTE WATER TREATMENT			
NAME	Prof. Reg. No	SIGNATURE	DATE

CONSULTANT DETAIL

The logo for DPT CIVIL & STRUCTURAL JV features a stylized orange building icon above the letters 'DPT' in a large, blue, serif font. Below 'DPT' is the text 'CIVIL & STRUCTURAL JV' in a smaller, blue, sans-serif font.

DPT CIVIL AND STRUCTURAL JV
POSTNET SUITE 453
SINOVILLE CONER
PERMANE BAG 5504
SINOVILLE
0129
TEL 012 567 7381
FAX: 012 567 1996
E-MAIL: info@dptshimaga.co.za

I. Z.D RANTA

Prof Reg No. 2011/70866

HEREBY CERTIFY THAT THE SERVICES WILL HAVE BEEN INSTALLED
ACCORDING TO NOTE 9 OF THE ABOVE NOTES AND TO THE
DRAWING

SIGNATURE

DATE





CONTRACT DRAWING NUMBER

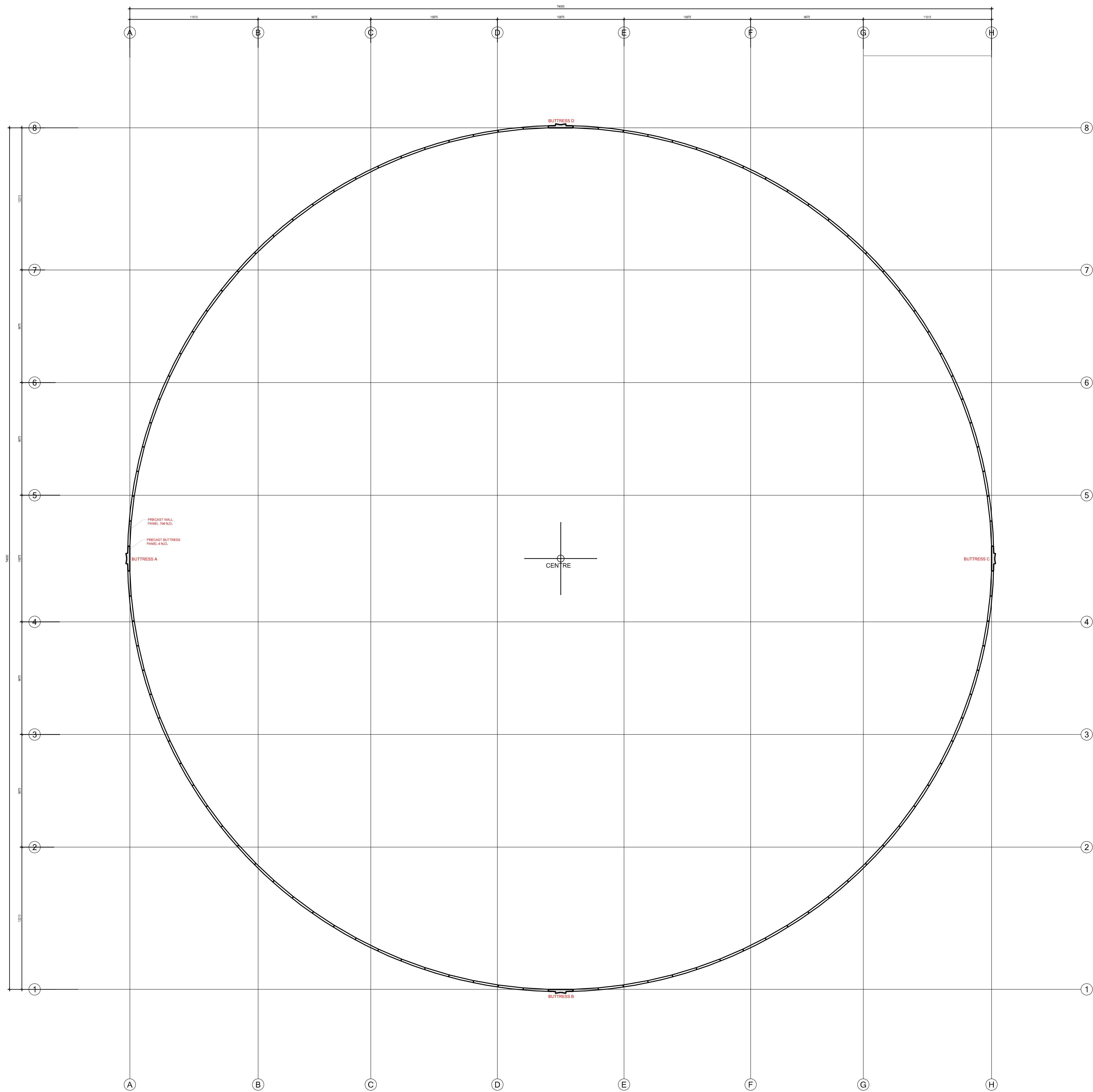
A circular professional seal for a South African Professional Engineer. It contains the text 'SOUTH AFRICAN PROFESSIONAL ENGINEER' around the perimeter and '01' in the center.

DESIGNED <small>Pr Tech Eng</small> <small>Prof Reg No 201170066</small>	
NAME: Z.D. RANTA	
SIGNATURE:	DATE:
DRAWN	
NAME: K. MOLEMA	
SIGNATURE:	DATE:
CHECKED <small>Prof Reg No 201170066</small>	
NAME: Z.D. RANTA	
SIGNATURE:	DATE:
INFORMATION OFFICE CHECKED	
NAME:	
SIGNATURE:	DATE:
DESIGN OFFICE APPROVAL <small>Pr Tech Eng</small> <small>Prof Reg No 201170066</small>	
NAME: Z.D. RANTA	
SIGNATURE:	DATE:

CONTRACT No.
PROJECT No
SHEET No.
PAPER SIZE A0
SCALE 1:1000
DATE: 10-07-2025

LOCATION OF PROJECT DESCRIPTION OF PROJECT: WBS No. _____ COT DRAWING NUMBER _____	<h1 style="margin: 0;">ZANDFONTEIN</h1> <h2 style="margin: 0;">HORNSNEK LL RESERVOIR FOUNDATION & FLOOR LAYOUT DETAILS</h2>
---	--

<h1 style="margin: 0;">PROJECT STATUS</h1>			
 CONCEPT DRAWING	 TENDER DRAWING	 APPROVED CONSTRUCTION DRAWING	 AS BUILT DRAWING
PROJECT ENGINEER of COT: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;">NAME _____</div> <div style="width: 45%;">SIGNATURE _____</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;">Prof Reg No. _____</div> <div style="width: 45%;">DATE _____</div> </div>			
INSPECTOR OF WORKS of COT: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;">NAME _____</div> <div style="width: 45%;">SIGNATURE _____</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;">DATE _____</div> <div style="width: 45%;">DATE _____</div> </div>			





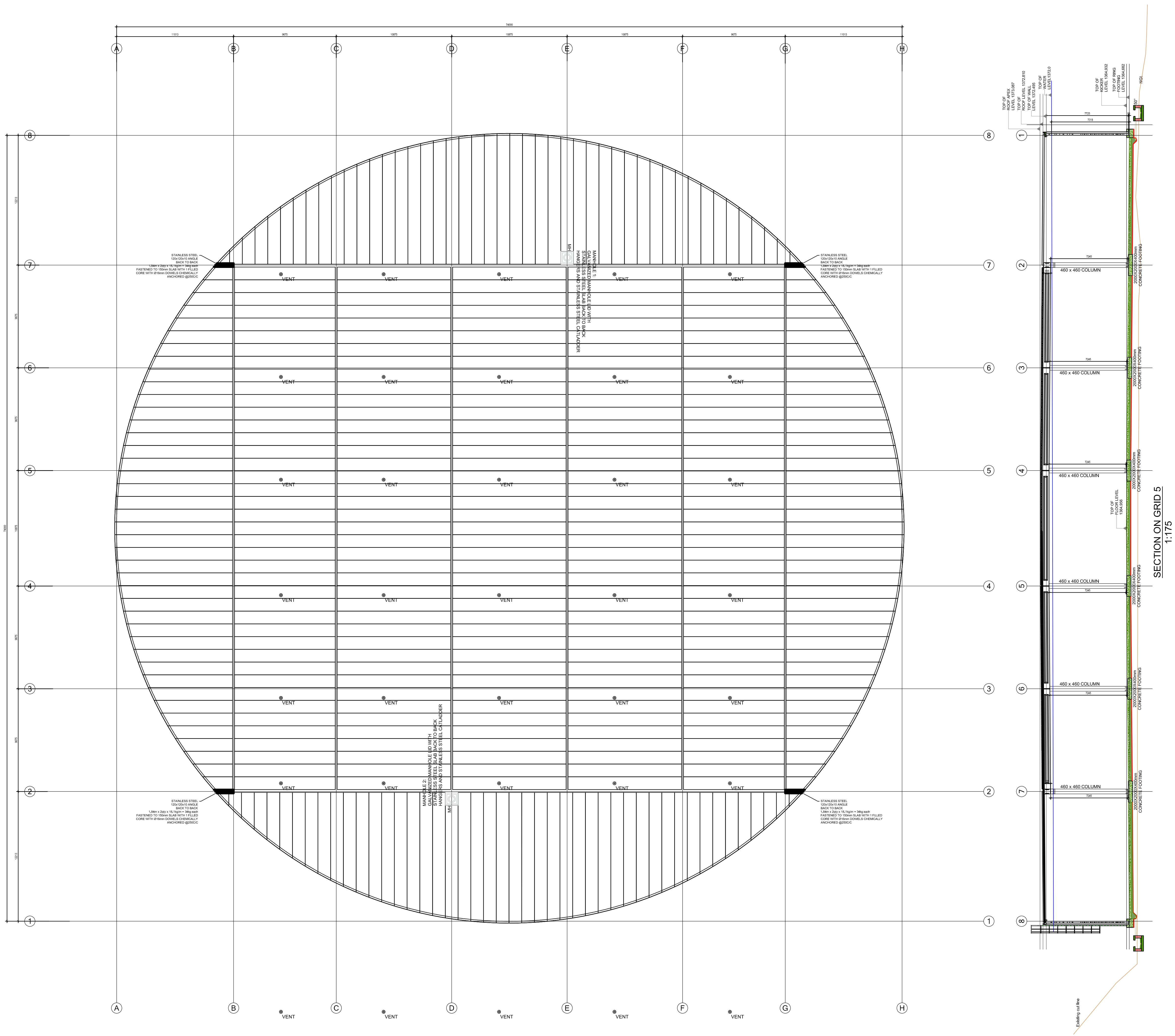
WALL PANEL & BUTTRESS LAYOUT
1:175

NOTES AND SPECIFICATIONS

GENERAL

1. ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.
2. ALL DIMENSIONS ARE IN MILLIMETRES. (UNLESS OTHERWISE SPECIFIED).
3. DO NOT SCALE FROM THESE DRAWINGS.
4. ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.
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8. THE SIGNATURE OR INITIALS ON THIS DRAWING, OF ANY DIRECTOR OF THE PUBLIC WORKS AND INFRASTRUCTURE DEVELOPMENT DEPARTMENT, IN NO WAY REMOVES ANY RESPONSIBILITY WHATSOEVER FROM THE CONSULTANT.
9. THE CONSULTANT REMAINS RESPONSIBLE TO ENSURE THAT ALL THE GUIDELINES, STANDARD DRAWINGS, STANDARDS AND SPECIFICATIONS OF THE PUBLIC WORKS AND INFRASTRUCTURE DEVELOPMENT DEPARTMENT HAVE BEEN MET AND ARE COMPLIED WITH.
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 CITY OF TSHWANE SERVICES INFRASTRUCTURE DEPARTMENT WATER AND SANITATION MR DUMISANE GUBUZA DIVISIONAL HEAD SIGNATURE _____ Prof. Reg. No. _____ DATE _____	AMENDMENTS				WATER AND SANITATION FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE				 DPT CIVIL AND STRUCTURAL JV POSTNET SUITE 453 SINOVILLE CONER PRIVATE BAG X504 SINOVILLE 0129 TEL: 012 567 7381 FAX: 012 567 1996 E-MAIL: info@dtshimaga.co.za I, Z.D.RANTA Prof. Reg Nr. 201170066 HEREBY CERTIFY THAT THE SERVICES WILL HAVE BEEN INSTALLED ACCORDING TO NOTE 9 OF THE ABOVE NOTES AND TO THE DRAWING SIGNATURE _____ DATE _____ CONSULTANT DRAWING NUMBER _____ <div>REVISION</div>		DESIGNED NAME: Z.D.RANTA P. Tech Eng. Prof. Reg No. 201170066 SIGNATURE: _____ DATE: _____		CONTRACT No. _____		LOCATION OF PROJECT ZANDFONTEIN		PROJECT STATUS <div><input type="radio"/> CONCEPT DRAWING <input checked="" type="radio"/> TENDER DRAWING <input type="radio"/> APPROVED CONSTRUCTION DRAWING <input type="radio"/> AS BUILT DRAWING</div>	
	DIRECTOR: INFRASTRUCTURE PROVISION				DRAWN NAME: K. MOLEMA SIGNATURE: _____ DATE: _____		PROJECT No. _____				DESCRIPTION OF PROJECT: HORNSNEK LL RESERVOIR WALL PANEL LAYOUT							
	DIRECTOR: WATER DISTRIBUTION				CHECKED NAME: Z.D.RANTA P. Tech Eng. Prof. Reg No. 201170066 SIGNATURE: _____ DATE: _____		SHEET No. _____						PROJECT ENGINEER of COT: NAME _____ SIGNATURE _____ Prof. Reg No. _____ DATE _____					
	DIRECTOR: BULK WATER SERVICES				INFORMATION OFFICE CHECKED NAME: _____ DATE: _____		PAPER SIZE A0				INSPECTOR OF WORKS of COT: NAME _____ SIGNATURE _____ DATE _____							
	DIRECTOR: WATER & SANITATION: PLANNING & REGULATION				DESIGN OFFICE APPROVAL NAME: Z.D.RANTA P. Tech Eng. Prof. Reg No. 201170066 SIGNATURE: _____ DATE: _____		SCALE 1:1000						WBS No. _____					
	DIRECTOR: WASTE WATER COLLECTION				CONSULTANT DRAWING NUMBER _____		DATE: 10-07-2025				COT DRAWING NUMBER _____							
	DIRECTOR: WASTE WATER TREATMENT				REVISION		DATE: 10-07-2025						REVISION					
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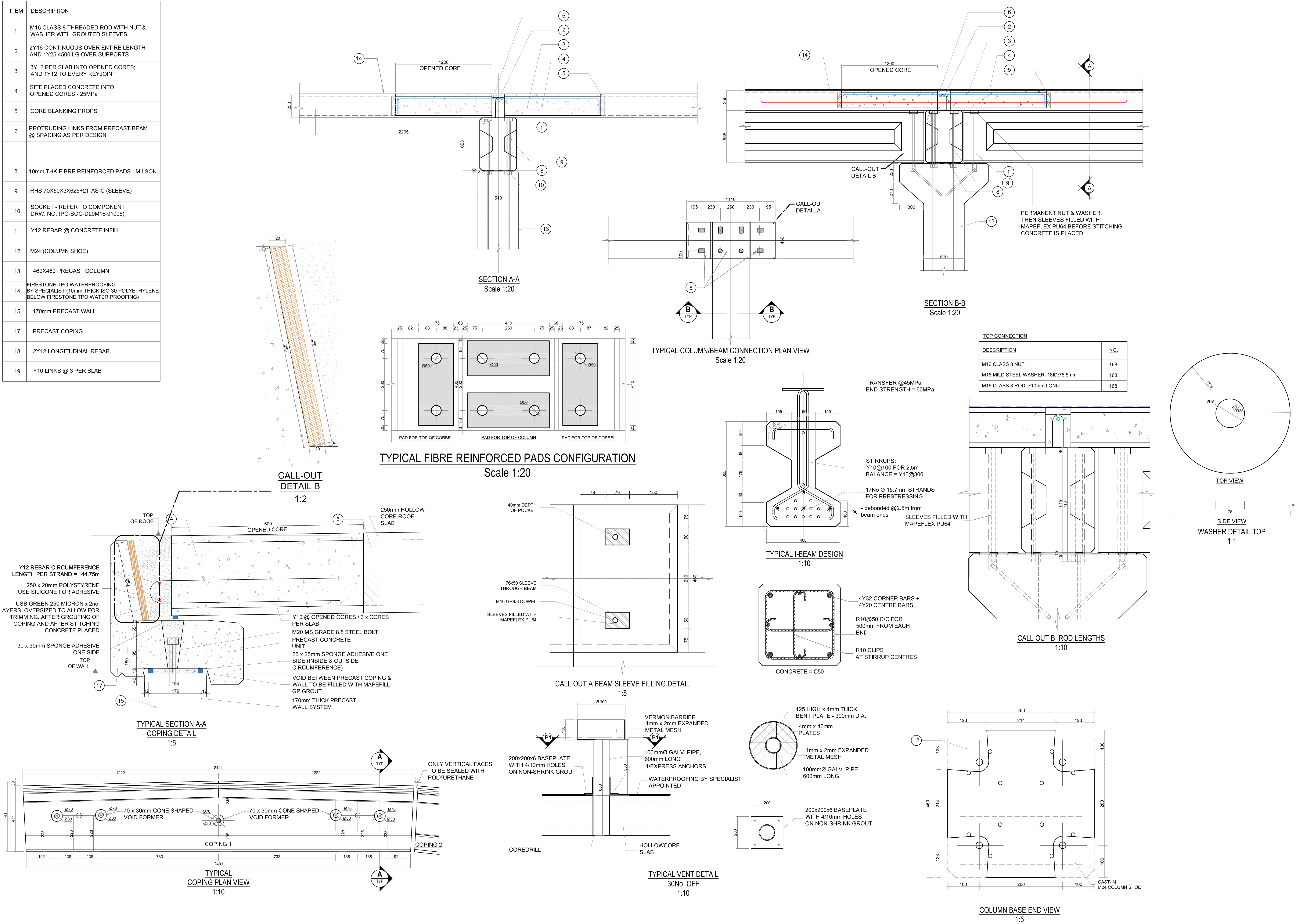
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 CITY OF TSHWANE SERVICES INFRASTRUCTURE DEPARTMENT WATER AND SANITATION MR DUMISANE GUBUZA DIVISIONAL HEAD	AMENDMENTS				WATER AND SANITATION FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE				 DPT CIVIL AND STRUCTURAL JV POSTNET SUITE 453 SINOVILLE CONER PRIVATE BAG X504 SINOVILLE TEL: 012 567 7381 FAX: 012 567 1996 E-MAIL: info@dtshimemo.co.za	DESIGNED NAME: Z.D. RANTA SIGNATURE: _____ DATE: _____ Prof Reg No. 201170066		CONTRACT No. _____ PROJECT No. _____ SHEET No. _____ PAPER SIZE _____ SCALE _____ DATE: 10-07-2025	LOCATION OF PROJECT ZANDFONTEIN		PROJECT STATUS		
	NR	DATE	APPROVED	DESCRIPTION	PAR	DIRECTOR: INFRASTRUCTURE PROVISION	NAME	Prof. Reg. No		SIGNATURE	DATE		NAME	Prof. Reg. No	SIGNATURE	DATE	NAME
1	10-07-2025	Z.D. RANTA	FIRST ISSUE FOR APPROVAL		DIRECTOR: WATER DISTRIBUTION	NAME	Prof. Reg. No	SIGNATURE	DATE	DRAWN NAME: K. MOLEMA SIGNATURE: _____ DATE: _____		DESCRIPTION OF PROJECT: HORNSNEK LL RESERVOIR ROOF SLAB LAYOUT & SECTION		<input type="radio"/> CONCEPT DRAWING		<input type="radio"/> TENDER DRAWING	
					DIRECTOR: BULK WATER SERVICES	NAME	Prof. Reg. No	SIGNATURE	DATE	CHECKED NAME: Z.D. RANTA SIGNATURE: _____ DATE: _____		WBS No. _____		<input type="radio"/> APPROVED CONSTRUCTION DRAWING		<input type="radio"/> AS BUILT DRAWING	
					DIRECTOR: WATER & SANITATION: PLANNING & REGULATION	NAME	Prof. Reg. No	SIGNATURE	DATE	INFORMATION OFFICE CHECKED NAME: _____ SIGNATURE: _____ DATE: _____		COT DRAWING NUMBER _____		<input type="radio"/> PROJECT ENGINEER of COT:		NAME _____ SIGNATURE _____	
					DIRECTOR: WASTE WATER COLLECTION	NAME	Prof. Reg. No	SIGNATURE	DATE	DESIGN OFFICE APPROVAL NAME: Z.D. RANTA SIGNATURE: _____ DATE: _____				<input type="radio"/> INSPECTOR OF WORKS of COT:		NAME _____ SIGNATURE _____	
					DIRECTOR: WASTE WATER TREATMENT	NAME	Prof. Reg. No	SIGNATURE	DATE					<input type="radio"/>		NAME _____ SIGNATURE _____	
						NAME	Prof. Reg. No	SIGNATURE	DATE							NAME _____ SIGNATURE _____	

ITEM	DESCRIPTION
1	M16 CLASS 8 THREADED ROD WITH NUT & WASHER WITH GROUTED SLEEVES
2	2Y16 CONTINUOUS OVER ENTIRE LENGTH AND 1Y25 4500 LG OVER SUPPORTS
3	3Y12 PER SLAB INTO OPENED CORES; AND 1Y12 TO EVERY KEYJOINT
4	SITE PLACED CONCRETE INTO OPENED CORES - 25MPa
5	CORE BLANKING PROPS
6	PROTRUDING LINKS FROM PRECAST BEAM @ SPACING AS PER DESIGN
8	10mm THK FIBRE REINFORCED PADS - MILSON
9	RHS 70X50X625+2T-AS-C (SLEEVE)
10	SOCKET - REFER TO COMPONENT DRW. NO. (PC-SOC-DL0M16-01006)
11	Y12 REBAR @ CONCRETE INFILL
12	M24 (COLUMN SHOE)
13	460X460 PRECAST COLUMN
14	FIRESTONE TPO WATERPROOFING BY SPECIALIST (10mm THICK ISO 30 POLYETHYLENE BELOW FIRESTONE TPO WATER PROOFING)
15	170mm PRECAST WALL
17	PRECAST COPING
18	2Y12 LONGITUDINAL REBAR
19	Y10 LINKS @ 3 PER SLAB



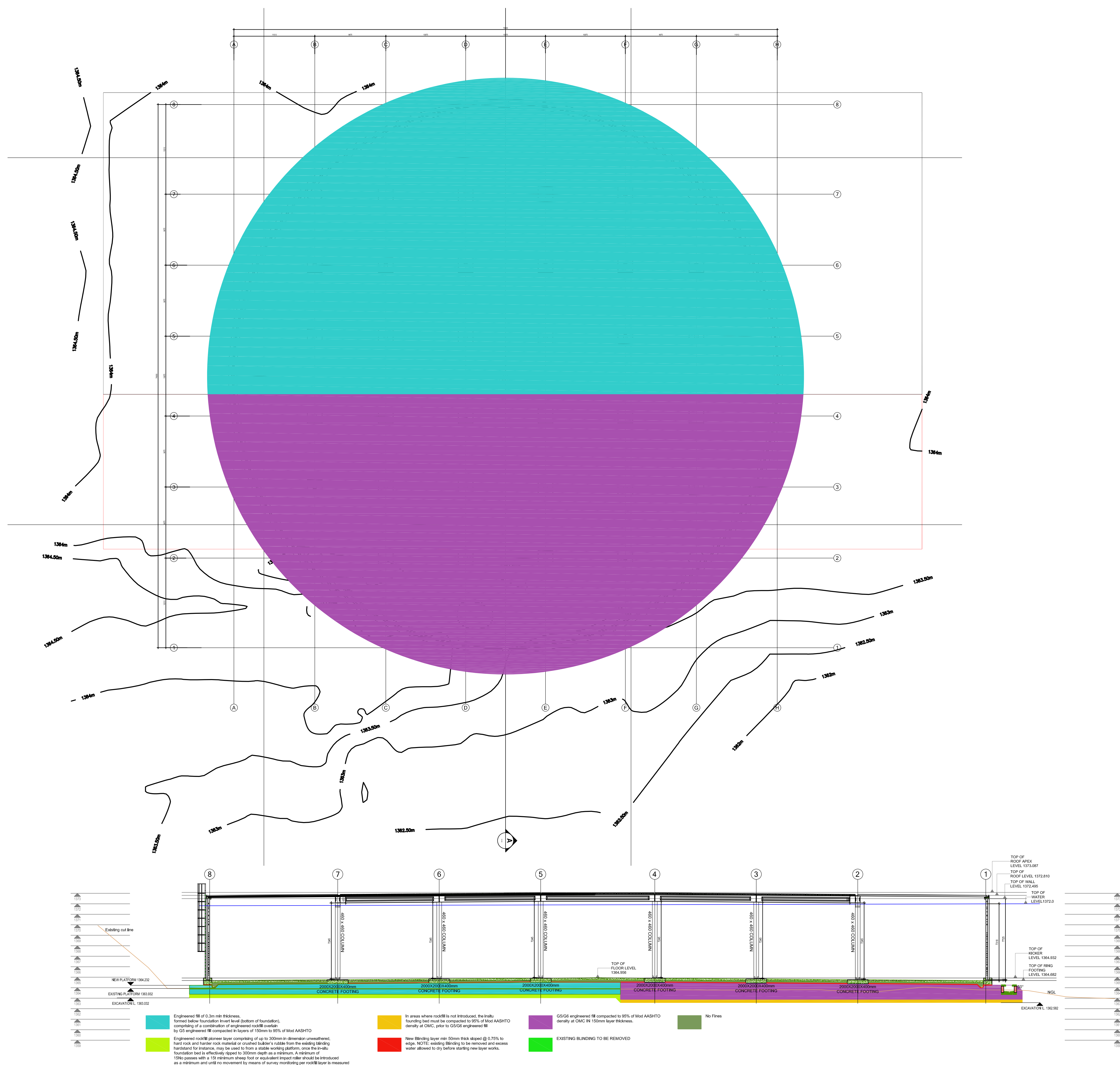
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- FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.

AMENDMENTS				
NR	DATE	APPROVED	DESCRIPTION	PAR
1	10-07-2025	Z.D RANTA	FIRST ISSUE FOR APPROVAL	

WATER AND SANITATION				
FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE				
DIRECTOR: INFRASTRUCTURE PROVISION				
NAME	Prof. Reg. No	SIGNATURE	DATE	
DIRECTOR: WATER DISTRIBUTION				
NAME	Prof. Reg. No	SIGNATURE	DATE	
DIRECTOR: BULK WATER SERVICES				
NAME	Prof. Reg. No	SIGNATURE	DATE	
DIRECTOR: WATER & SANITATION: PLANNING & REGULATION				
NAME	Prof. Reg. No	SIGNATURE	DATE	
DIRECTOR: WASTE WATER COLLECTION				
NAME	Prof. Reg. No	SIGNATURE	DATE	
DIRECTOR: WASTE WATER TREATMENT				
NAME	Prof. Reg. No	SIGNATURE	DATE	



1. ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT STANDARDS.
2. ALL DIMENSIONS ARE IN MILLIMETRES, (UNLESS OTHERWISE SPECIFIED).
3. DO NOT SCALE OR COPY FROM DRAWINGS.
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8. THE CONSULTANT SHALL BE RESPONSIBLE FOR THIS DRAWING, AS ANY DIRECTOR OF THE PUBLIC WORKS AND INFRASTRUCTURE DEVELOPMENT DEPARTMENT, IN A CAPACITY OF A CONSULTANT, SHALL BE RESPONSIBLE TO TAKE OVER FROM THE CONSULTANT.
9. THE CONSULTANT REMAINS RESPONSIBLE TO ENSURE THAT ALL GUIDELINES, STANDARD DRAWINGS, STANDARDS AND SPECIFICATIONS OF THE PUBLIC WORKS AND INFRASTRUCTURE DEVELOPMENT DEPARTMENT HAVE BEEN MET AND ARE COMPLIED WITH.
10. THE EXACT POSITION OF SERVICE ARE TO BE DETERMINED ON SITE.

CITY OF TSHWANE
SERVICES INFRASTRUCTURE
DEPARTMENT
WATER AND SANITATION

MR DUMISANE GUBUZA
DIVISIONAL HEAD


[illegible]

<h1 style="text-align: center;">WATER AND SANITATION</h1> <p style="text-align: center;">FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE</p>			
DIRECTOR: INFRASTRUCTURE PROVISION			
NAME	Prof. Reg. No	SIGNATURE	DATE
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NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: WASTE WATER TREATMENT			
NAME	Prof. Reg. No	SIGNATURE	DATE



DPT CIVIL AND STRUCTURAL
POSTNET SUITE 453
SINOVILLE CONER
PRIVATE BAG X504
SINOVILLE
0129
TEL: 012 567 7381
FAX: 012 567 1996
E-MAIL: info@ditshimega.co.za

CONSULTANT DRAWING NUMBER

<div style="text-align: center;">  REVISIO </div>
--

DESIGNED	
NAME: <u>Z.D RANTA</u>	Pr Tech Eng Prof Reg No <u>201170066</u>
SIGNATURE:	DATE:
DRAWN	
NAME: <u>K. MOLEMA</u>	
SIGNATURE:	DATE:
CHECKED	
NAME: <u>Z.D RANTA</u>	Prof Reg No <u>201170066</u>
SIGNATURE:	DATE:
INFORMATION OFFICE CHECKED	
NAME:	
SIGNATURE:	DATE:
DESIGN OFFICE APPROVAL	
NAME: <u>Z.D RANTA</u>	Pr Tech Eng Prof Reg No <u>201170066</u>
SIGNATURE:	DATE:

CONTRACT No.	*****
PROJECT No.	*****
SHEET No.	*****
PAPER SIZE	A0
SCALE	1:1000
DATE:	10-07-2025

ZANDFONTEIN

DESCRIPTION OF PROJECT:

HORNSNEK LL RESERVOIR EARTH WORKS DETAIL

COT DRAWING NUMBER

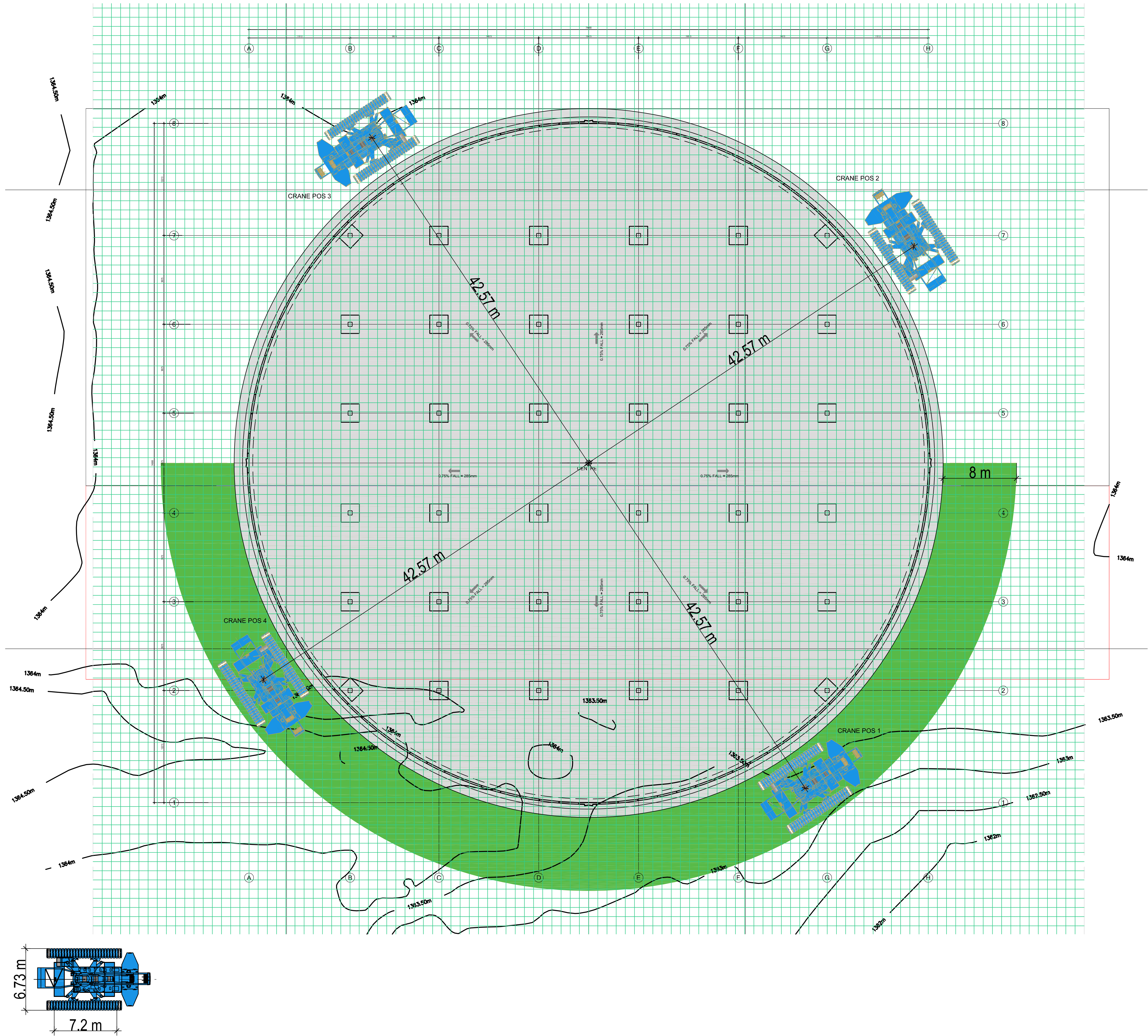
0-07-2025...



NAME	SIGNATURE
Prof Reg No.	DATE

NAME _____ SIGNATURE _____
DATE _____



SIGNATURE _____ Prof. Reg. No. _____ DATE _____

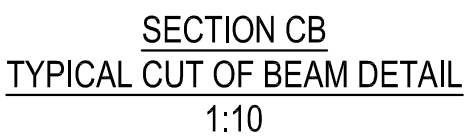
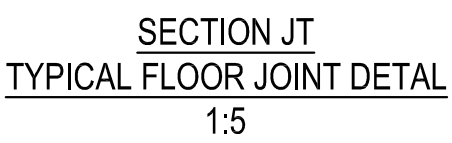


NOTES AND SPECIFICATIONS

GENERAL





1. ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.
2. ALL DIMENSIONS ARE IN MILLIMETRES. (UNLESS OTHERWISE SPECIFIED).
3. DO NOT SCALE FROM THESE DRAWINGS.
4. ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.
5. 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.
6. THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE STANDARD DRAWINGS (IF APPLICABLE).
7. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, SERIES 4.
8. THE SIGNATURE OR INITIALS ON THIS DRAWING, OF ANY DIRECTOR OF THE PUBLIC WORKS AND INFRASTRUCTURE DEVELOPMENT DEPARTMENT, IN NO WAY REMOVES ANY RESPONSIBILITY WHATSOEVER FROM THE CONSULTANT.
9. THE CONSULTANT REMAINS RESPONSIBLE TO ENSURE THAT ALL THE GUIDELINES, STANDARD DRAWINGS, STANDARDS AND SPECIFICATIONS OF THE PUBLIC WORKS AND INFRASTRUCTURE DEVELOPMENT DEPARTMENT HAVE BEEN MET AND ARE COMPLIED WITH.
10. FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.

 CITY OF TSHWANE SERVICES INFRASTRUCTURE DEPARTMENT WATER AND SANITATION MR DUMISANE GUBUZA DIVISIONAL HEAD	AMENDMENTS				WATER AND SANITATION FOR INTERNAL APPROVAL - RECEIVED SIGN WHEN APPLICABLE				CONSULTANT DETAIL		DESIGNED		CONTRACT		LOCATION OF PROJECT		PROJECT STATUS			
	NR	DATE	APPROVED	DESCRIPTION	PAR	DIRECTOR:INFRASTRUCTURE PROVISION	NAME	Prof. Reg. No	SIGNATURE	DATE	 DPT CIVIL AND STRUCTURAL JV POSTNET SUITE 453 SINOVILLE CONER PRIVATE BAG X504 SINOVILLE 0129 TEL: 012 567 7381 FAX: 012 567 1996 E-MAIL: info@dtshimaga.co.za	NAME: Z.D. RANTA Prof Reg No.201170066 SIGNATURE:..... DATE:.....	PROJECT No.	ZANDFONTEIN		<input type="radio"/> CONCEPT DRAWING	<input type="radio"/> TENDER DRAWING	<input type="radio"/> APPROVED CONSTRUCTION DRAWING	<input type="radio"/> AS BUILT DRAWING	
	1	10-07-2025	Z.D. RANTA	FIRST ISSUE FOR APPROVAL		DIRECTOR: WATER DISTRIBUTION	NAME	Prof. Reg. No	SIGNATURE	DATE	NAME: K. MOLEMA Prof Reg No.201170066 SIGNATURE:..... DATE:.....	DRAWN	SHEET No.	DESCRIPTION OF PROJECT:		PROJECT ENGINEER of COT:				
						DIRECTOR: BULK WATER SERVICES	NAME	Prof. Reg. No	SIGNATURE	DATE	NAME: Z.D. RANTA Prof Reg No.201170066 SIGNATURE:..... DATE:.....	CHECKED	PAPER SIZE	HORNSNEK LL RESERVOIR SUBSOIL DRAINAGE DETAIL		INSPECTOR OF WORKS of COT:				
					DIRECTOR: WATER & SANITATION: PLANNING & REGULATION	NAME	Prof. Reg. No	SIGNATURE	DATE	NAME:..... DATE:.....	INFORMATION OFFICE CHECKED	SCALE	WBS No.		NAME					
					DIRECTOR: WASTE WATER COLLECTION	NAME	Prof. Reg. No	SIGNATURE	DATE	NAME:..... DATE:.....	DESIGN OFFICE APPROVAL	DATE	COT DRAWING NUMBER		SIGNATURE					
					DIRECTOR: WASTE WATER TREATMENT	NAME	Prof. Reg. No	SIGNATURE	DATE	NAME: Z.D. RANTA Prof Reg No.201170066 SIGNATURE:..... DATE:.....		DATE			DATE					
					NAME	Prof. Reg. No	SIGNATURE	DATE	CONSULTANT DRAWING NUMBER											



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2. ALL DIMENSIONS ARE IN MILLIMETRES (UNLESS OTHERWISE SPECIFIED).
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4. ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.
5. ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, THIRD EDITION 2005 AND ALL STANDARD CODES.
6. THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE STANDARD DRAWINGS (IF APPLICABLE).
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8. THE CONSULTANT IS RESPONSIBLE FOR THIS DRAWING, AS ANY DIRECTOR OF THE PUBLIC WORKS AND INFRASTRUCTURE DEVELOPMENT DEPARTMENT, IN ANY CIRCUMSTANCES, HAS GIVEN HIS SIGNATURE THEREON FOR THE CONSULTANT.
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10. FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.

SIGNATURE _____ Prof. Reg. No _____ DATE _____

PROJECT STATUS			
 CONCEPT DRAWING	 TENDER DRAWING	 APPROVED CONSTRUCTION DRAWING	 AS BUILT DRAWING
PROJECT ENGINEER of COT:			
NAME		SIGNATURE	
Prof Reg No.		DATE	
INSPECTOR OF WORKS of COT:			
		SIGNATURE	
NAME		DATE	