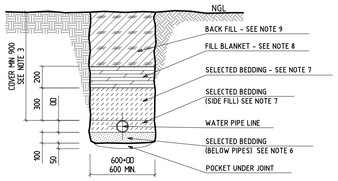
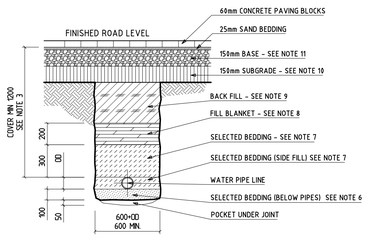


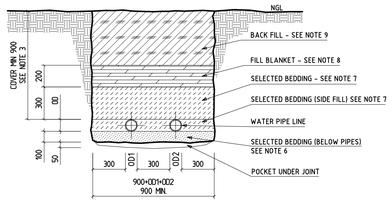
D402-01 : TYPICAL TRENCHING SECTION IN NON-TRAFFICKED AREAS

SCALE 1:20



D402-02 : TYPICAL TRENCHING SECTION UNDER DRIVEWAYS

SCALE 1:20

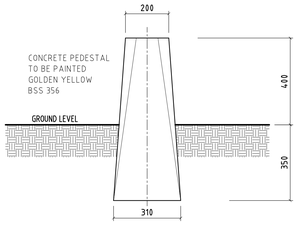


D402-03 : TYPICAL TRENCHING SECTION - TYPE 2 DOUBLE PIPE INSTALLATION

SCALE 1:20

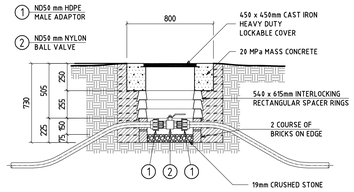
D402-04 : CONCRETE PIPE AND VALVE MARKER - PLAN

SCALE 1:10



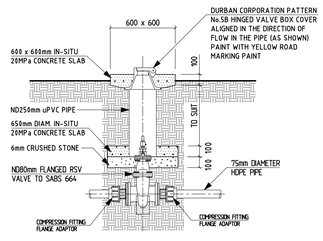
D402-04 : CONCRETE PIPE AND VALVE MARKER ELEVATION

SCALE 1:10



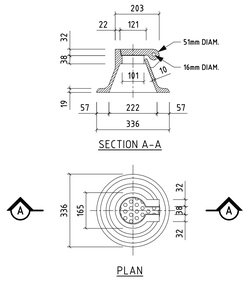
D402-05 : ND50mm ISOLATION VALVE BOX ON 50mm Ø HDPE PIPELINE

SCALE 1:20



D402-06 : ND80mm ISOLATION VALVE ON 75mm Ø HDPE PIPE

SCALE 1:20



D402-06 : WATER VALVE COVER

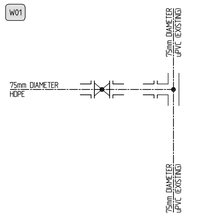
SCALE 1:10

NOTES :

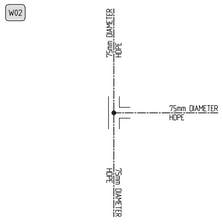
1. ALL TRENCHING TO COMPLY WITH SABS 1200 IN PARTICULAR :
   - SABS 1200 DB (TRENCH EXCAVATION)
   - SABS 1200 L (MEDIUM PRESSURE PIPELINES)
   - SABS 1200 LB (BEDDING)
2. FREEHAUL DISTANCE FROM TRENCH EXCAVATION :
   - FOR BEDDING MATERIAL IS 0.5km
   - FOR DISPOSAL OF SURPLUS MATERIAL IS 10km FOR MACHINES
   - FOR DISPOSAL OF SURPLUS MATERIAL IS 0.2km FOR WHEELBARROWS (PSDA)
3. PIPE COVER :
   - PIPES LAID UNDER A ROAD ARE TO HAVE A COVER OF 1200mm.
   - PIPES LAID IN ROAD RESERVES ARE TO HAVE A COVER OF 1000mm AND TO BE CONSIDERED AS "TRAFFICKED".
   - ALL OTHER PIPES GREATER THAN 110mm Ø ARE TO HAVE A MINIMUM COVER OF 900mm UNLESS OTHERWISE DIRECTED BY THE ENGINEER BASED ON SITE TOPOGRAPHIC CONDITIONS.
   - ALL OTHER PIPES LESS THAN AND INCLUDING 110mm Ø ARE TO HAVE MINIMUM COVER OF 700mm.
4. PIPES MUST BE BACKFILLED IMMEDIATELY AFTER LAYING, WITH JOINTS LEFT OPEN FOR TESTING
5. TRENCHING :
   - THE WIDTH OF THE TRENCH SHALL BE 600mm (300mm EITHER SIDE) GREATER THAN THE OUTSIDE DIAMETER OF THE PIPE WITH A MINIMUM WIDTH OF 600mm
   - THE TRENCH SHALL NOT BE EXCAVATED TOO FAR IN ADVANCE OF THE PIPE LAYING
   - THE BOTTOM OF THE TRENCH SHALL BE FREE FROM STONES, PROJECTIONS, SOFT SPOTS AND SHALL BE UNIFORM
6. SELECTED BEDDING - BELOW PIPE :
   - THE BEDDING FREE OF STONES
   - THE BEDDING SHALL BE A MINIMUM OF 100mm
   - GRANULAR MATERIAL - GRADE 0.6mm TO 19mm NON-COHESIVE, FREE DRAIN MATERIAL (SABS 1200 LB 3.2) UNLESS OTHER WISE STATED IN THE PROJECT SPECIFICATIONS
7. SELECTED BEDDING - SIDEFILL :
   - SELECTED BACKFILL MATERIAL SHALL BE PLACES IN EVEN LAYERS OF 150mm OVER THE ENTIRE WIDTH OF THE TRENCH TO A HEIGHT OF 300mm ABOVE THE CROWN OF THE PIPE
   - ALL LAYERS TO BE FIRMLY TAMPED BY HAND
   - GRANULAR MATERIAL - GRADE 0.6mm TO 19mm NON-COHESIVE, FREE DRAIN MATERIAL (SABS 1200 LB 3.2) UNLESS OTHER WISE STATED IN THE PROJECT SPECIFICATIONS
8. FILL BLANKET :
   - 200mm THICK
   - "PI" NOT GREATER THAN 6
   - STONES NOT GRATER THAN 30mm (SABS 1200 LB 3.2)
   - COMPACTED TO 90% MOD. AASHTO DENSITY (SABS 1200 LB 5.14)
9. BACKFILL :
   - BACKFILL SHALL BE UNIFORM READILY COMPACTED MATERIAL FREE FROM TREE ROOTS, VEGETABLE MATTER AND BUILDERS RUBBLE
   - BACKFILL SHALL NOT CONTAIN MORE THAN 10% ROCK AND STONE GRATER THAN 50mm (SABS 1200 DB 3.5)
   - COMPACTED IN LAYERS OF 150mm IN ROAD RESERVES AND OTHER AREAS CONSIDERED AS TRAFFICKED
   - AREAS NOT SUBJECTED TO TRAFFIC LOADS – COMPACTED IN LAYERS NOT EXCEEDING 300mm TO A COMPACTION OF 90% MOD AASHTO DENSITY (SABS 1200 DB 5.7.2)
   - AREAS SUBJECTED TO TRAFFIC LOADS – COMPACTED IN LAYERS OF 150mm TO A COMPACTION OF 93% MOD AASHTO DENSITY (SABS DB 5.7.2)
10. SUBGRADE :
    - 150mm SUBGRADE LAYER
    - COMPACTED TO 93% MOD AASHTO DENSITY
11. BASE
    - 150mm BASE LAYER
    - G2 CRUSHED STONE

WATER FITTINGS LOCALITY SCHEDULE

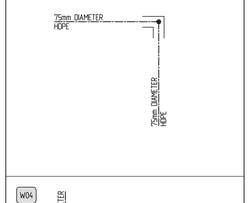
W01



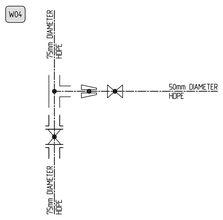
W02



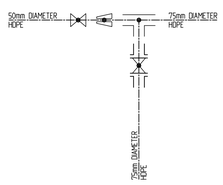
W03



W04



W05



LEGEND

- ND50 mm NYLON BALL VALVE
- HDPE COMPRESSION REDUCING TEE
- HDPE COMPRESSION EQUAL TEE
- HDPE COMPRESSION FLANGE ADAPTOR
- FLANGED RSV VALVE
- ND80mm SG IRON HYDRANTB TEE

SCHEDULE OF HDPE COMPRESSION FITTINGS

STRAIGHT COUPLING	D x D	QUANTITY	
	16 x 16		-
	20 x 20		-
	25 x 25		-
	32 x 32		-
	40 x 40		-
	50 x 50	●	2
	63 x 63		-
	75 x 75	●	3
	90 x 90		-
	110 x 110		-

REDUCER COUPLING	D x D1	QUANTITY	
	20 x 16		-
	25 x 20		-
	32 x 20		-
	32 x 25		-
	40 x 25		-
	40 x 32		-
	50 x 25		-
	50 x 32		-
	50 x 40		-
	63 x 32		-
	63 x 40		-
	63 x 50		-
	75 x 50		-
	75 x 63		-
	90 x 63		-
	90 x 75		-
	110 x 75		-
	110 x 90		-

MALE ADAPTOR	D x G	QUANTITY	
	16 x 1/8"		-
	16 x 1/2"		-
	16 x 3/4"		-
	20 x 1/2		-
	20 x 3/4"		-
	25 x 1/2"		-
	25 x 3/4"		-
	25 x 1"		-
	32 x 3/4"		-
	32 x 1"		-
	32 x 1 1/4"		-
	40 x 1"		-
	40 x 1 1/4"		-
	40 x 1 1/2"		-
	50 x 1 1/4"		-
	50 x 1 1/2"		-
	50 x 2"	●	8
	63 x 1 1/2"		-
	63 x 2"		-
	63 x 2 1/2"		-
	75 x 2"		-
	75 x 2 1/2"		-
	75 x 3"		-
	90 x 2"		-
	90 x 2 1/2"		-
	90 x 3"		-
	90 x 4"		-
	110 x 2"		-
	110 x 3"		-
	110 x 4"		-

FEMALE ADAPTOR	D x G	QUANTITY	
	16 x 1/8"		-
	16 x 1/2"		-
	20 x 1/2		-
	20 x 3/4"		-
	25 x 1/2"		-
	25 x 3/4"		-
	25 x 1"		-
	32 x 1/2"		-
	32 x 3/4"		-
	32 x 1"		-
	32 x 1 1/4"		-
	40 x 1"		-
	40 x 1 1/4"		-
	40 x 1 1/2"		-
	50 x 1 1/4"		-
	50 x 1 1/2"		-
	50 x 2"		-
	63 x 1 1/2"		-
	63 x 2"		-
	75 x 2"		-
	75 x 2 1/2"		-
	75 x 3"		-
	90 x 3"		-
	110 x 3"		-
	110 x 4"		-

ELBOW	D x D	QUANTITY	
	16 x 16		-
	20 x 20		-
	25 x 25		-
	32 x 32		-
	40 x 40		-
	50 x 50		-
	63 x 63		-
	75 x 75	●	7
	90 x 90		-
	110 x 110		-

ELBOW MALE THREADED	D x G	QUANTITY	
	16 x 1/2"		-
	20 x 1/2		-
	20 x 3/4"		-
	25 x 1/2		-
	25 x 3/4"		-
	25 x 1"		-
	32 x 1"		-
	32 x 1 1/4"		-
	40 x 1 1/4"		-
	40 x 1 1/2"		-
	50 x 1 1/2"		-
	50 x 2"		-
	63 x 2"		-
	63 x 2 1/2"		-
	75 x 2 1/2"		-
	75 x 3"		-
	90 x 3"		-
	90 x 4"		-
	110 x 4"		-

ELBOW FEMALE THREADED	D x G	QUANTITY	
	16 x 1/4"		-
	16 x 1/2"		-
	20 x 1/2		-
	20 x 3/4"		-
	25 x 1/2"		-
	25 x 3/4"		-
	25 x 1"		-
	32 x 1/2"		-
	32 x 3/4"		-
	32 x 1"		-
	32 x 1 1/4"		-
	40 x 1 1/4"		-
	40 x 1 1/2"		-
	50 x 2"		-
	63 x 2"		-
	63 x 2 1/2"		-
	75 x 2 1/2"		-
	75 x 3"		-
	90 x 3"		-
	90 x 4"		-
	110 x 4"		-

EQUAL TEE	D x D x D	QUANTITY	
	16 x 16 x 16		-
	20 x 20 x 20		-
	25 x 25 x 25		-
	32 x 32 x 32		-
	40 x 40 x 40		-
	50 x 50 x 50		-
	63 x 63 x 63		-
	75 x 75 x 75	●	2
	90 x 90 x 90		-
	110 x 110 x 110		-

INCREASING TEE	D x D1 x D	QUANTITY	
	20 x 25 x 20		-
	25 x 32 x 25		-

REDUCING TEE	D x D1 x D	QUANTITY	
	25 x 20 x 225		-
	32 x 25 x 32		-
	40 x 32 x 40		-
	50 x 40 x 50		-
	63 x 50 x 63		-

TEE MALE THREADED	D x G x D	QUANTITY	
	16 x 1/2" x 16		-
	20 x 1/2" x 20		-
	20 x 3/4" x 20		-
	25 x 3/4" x 25		-
	25 x 1" x 25		-
	32 x 1" x 32		-
	32 x 1 1/4" x 32		-
	40 x 1 1/4" x 40		-
	40 x 1 1/2" x 40		-
	50 x 1 1/2" x 50		-
	50 x 2" x 50		-
	63 x 2" x 63		-
	63 x 2 1/2" x 63		-
	75 x 2 1/2" x 75		-
	75 x 3" x 75		-
	90 x 3" x 90		-
	90 x 4" x 90		-
	110 x 4" x 110		-

TEE FEMALE THREADED	D x G x D	QUANTITY	
	16 x 1/8" x 16		-
	16 x 1/2" x 16		-
	20 x 1/2" x 20		-
	20 x 3/4" x 20		-
	25 x 1/2" x 25		-
	25 x 3/4" x 25		-
	25 x 1" x 25		-
	32 x 1/2" x 32		-
	32 x 3/4" x 32		-
	32 x 1" x 32		-
	32 x 1 1/4" x 32		-
	40 x 1" x 40		-
	40 x 1 1/4" x 40		-
	40 x 1 1/2" x 40		-
	50 x 1 1/2" x 50		-
	50 x 2" x 50		-
	63 x 2" x 63		-
	63 x 2 1/2" x 63		-
	75 x 2 1/2" x 75		-
	75 x 3" x 75		-
	90 x 3" x 90		-
	90 x 4" x 90		-
	110 x 4" x 110		-

END PLUG	D	QUANTITY	
	16		-
	20		-
	25		-
	32		-
	40		-
	50		-
	65		-
	75		-
	90		-
	110		-

END PLUG	D x DN	QUANTITY	
	75 x 2 1/2"		-
	75 x 3"	●	13
	90 x 3"		-
	90 x 4"		-
	110 x 4"		-

SCHEDULE OF PIPE SPECIALS

ITEM	DESCRIPTION	QUANTITY
	ND50 mm NYLON BALL VALVE	4
	ND80 mm FLANGED RSV VALVE TO SABS 664	6
	DURBAN CORPORATION PATTERN No.5B HINGED VALVE BOX COVER ALIGNED IN THE DIRECTION OF FLOW IN THE PIPE (AS SHOWN) PAINT WITH YELLOW ROAD MARKING PAINT	6
	ND80 mm SG IRON HYDRANT TEE	1

ITEM	DESCRIPTION	QUANTITY
	PRECAST CONCRETE PIPE AND VALVE MARKER	20

Notes:

MUNICIPAL CONNECTION

1. CONTRACTOR SHALL CONFIRM THE ACTUAL MUNICIPAL CONNECTION WITH THE ENGINEER AND THE MUNICIPALITY.

FOR TENDER
ORIGINAL IN RED
ORIGINAL
SIGNED: DATE: 16/07/2023

REFERENCE DRAWINGS

Dwg. No.	Description
PH3-C301	WATER SERVICES LAYOUT PLAN

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Date: ____
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No.	DATE	AMENDMENT	Rev By
T	16-07-2023	ISSUED FOR TENDER	EMC

Cad File Name
C402-WATER SERVICES DETAILS-Rev-T.dwg

Checked By Consultant

E.M. CHRWA — Name
20020003 — Professional Registration No.
Signature
16-07-2023 — Date

Consultant

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Discipline
CIVIL AND STRUCTURAL

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Project
DEPARTMENT OF EDUCATION
EASTERN CAPE PROVINCE
CONSTRUCTION OF
SIVE MALUTI SPECIAL SCHOOL
PHASE 3 CEDARVILLE

Drawing Description
PHASE 3 CEDARVILLE
WATER SERVICES
FITTINGS AND SPECIALS
DETAILS

Drawn: A. SIWENDU	Date: 16-07-2023
Scale: AS SHOWN	Sheet Size: A0
Consultant Drawing Number: IDT-EC-SM-PH3-C402	Revision: T
DOW Drawing Number: IDT-EC-SM-PH3-C402	Revision: T

Stamped by Plans Approval Committee

IDT-EC-SM-PH3-C402 REV. T