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**'VARIO-BEND' CUTTING TABLE**

DEFLECTION		LENGTH (mm)	
DEGREES	%	MEASURED ALONG OUTSIDE CURVED FACE OF 'VARIO-BEND'	
		R=3000mm L=53.8mm PER 1°	R=625mm L=12.5mm PER 1°
2	3.49	MIN. 110	N/A
3	5.24	150	N/A
4	6.99	215	N/A
5	8.74	270	N/A
6	10.51	325	N/A
7	12.27	375	N/A
8	14.05	430	MIN. 100
9	15.83	485	110
10	17.63	540	125
11	19.43	590	135
12	21.25	645	150
13	23.08	700	160
14	24.93	755	175
15	26.79	805	185
16	28.67	860	200
17	30.57	915	210
18	32.49	970	225
19	34.43	1020	235
20	36.40	1075	250
21	38.38	1130	260
22	40.40	1185	275
23	42.44	1235	285
24	44.52	1290	300
25	46.63	1345	310
26	48.77	1400	325
27	50.95	1450	335
28	53.17	1505	350
29	55.43	1560	360
30	57.73	1615	375
31	60.08	1670	390
32	62.48	1720	400
33	64.94	1775	415
34	67.45	1830	425
35	70.02	1885	440
36	72.65	1935	450
37	75.35	1990	465
38	78.12	2045	475
39	80.97	2100	490
40	83.90	2150	500
41	86.92	2205	515
42	90.04	2260	525
43	93.25	2315	540
44	96.56	2365	550
45	100.00	MAX. 2420	MAX. 565

**LIMITS OF CONTRACT**  
**WORK BY CONSTRUCTOR**  
 1. CONSTRUCT THE RETICULATION SEWER AS SHOWN.  
 2. PROVIDE THE LINK-UP AT 'A' (EXISTING MS WITH STUB)  
 - INSTALL PLUNGER IN EXISTING MS END ASSEMBLY.  
 - EXCAVATE UP TO EXISTING MS, EXPOSE STUB, REMOVE CAP, CONNECT AND LAY AWAY WITH NEW SEWER.  
 - REMOVE PLUNGER AFTER TESTING AND BEFORE CPC ISSUE.

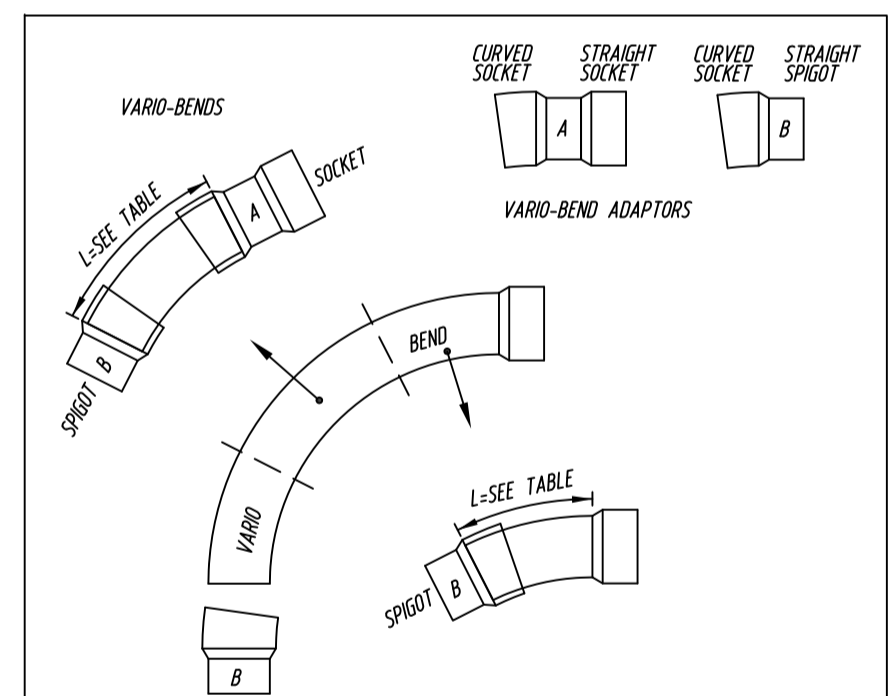
CONSTRUCTOR SHALL BE ACCREDITED BY SA WATER TO UNDERTAKE THIS WORK.

**NOTES**  
**EXISTING SERVICES**  
 - PRIOR TO COMMENCING ANY CONSTRUCTION WORKS, THE CONSTRUCTOR SHALL LOCATE AND DEPTH ALL OTHER EXISTING UNDERGROUND SERVICES IN VICINITY OF WORKS. ANY DISCREPANCIES OF DEPTH OR LOCATION FROM THAT INDICATED ON THESE DRAWINGS SHALL BE REPORTED TO ENGINEER.  
 - IT SHALL BE NOTED THAT THERE MAY BE OTHER EXISTING UNDERGROUND SERVICES IN THE VICINITY OF WORKS OTHER THAN THOSE SHOWN ON THESE DRAWINGS.  
 - IT SHALL BE THE CONSTRUCTOR'S RESPONSIBILITY TO DETERMINE IF OTHER UNDERGROUND SERVICES ARE PRESENT AND HAVE ALL SERVICES LOCATED AND DEPTHD PRIOR TO COMMENCING WORKS.

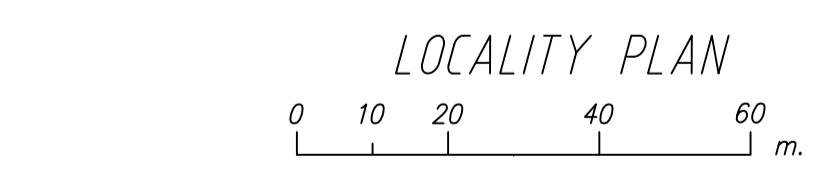
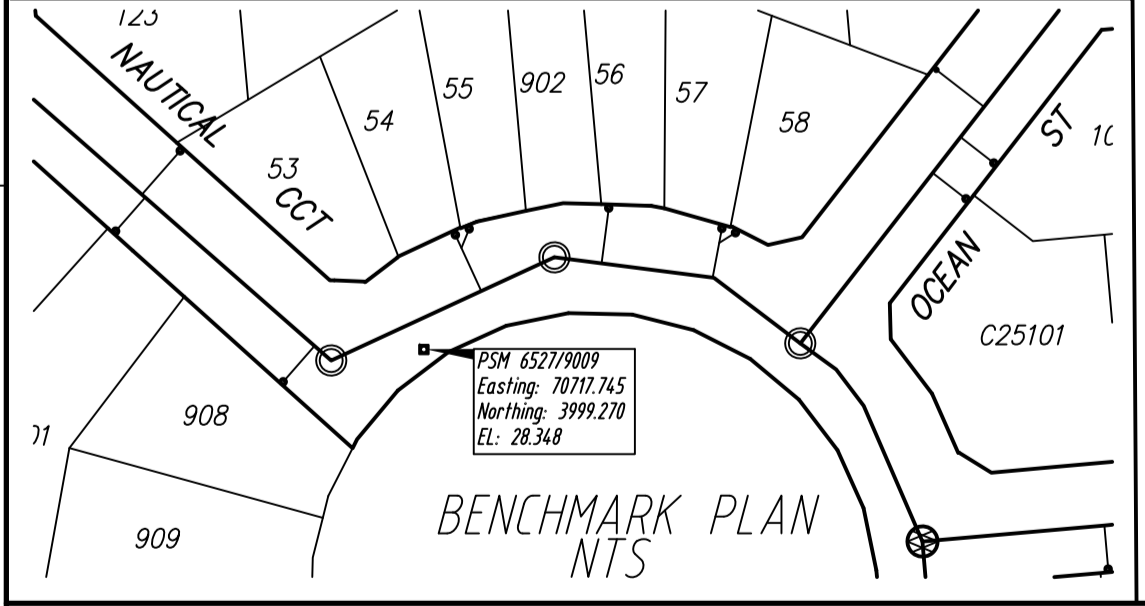
**CONNECTIONS**  
 - ALL CONNECTIONS TO BE LAID SIMILAR TO S.C.M. (K3) & (K4) UNLESS NOTED OTHERWISE.  
 - CONNECTIONS TO LOTS 329, 334/335, 352, 357 & 367/388 TO BE LAID WITH A RISER OFF THE MAIN SIMILAR TO S.C.M. (K5).  
 - CONNECTIONS TO LOTS 328, 387/366, 337, 338/339, 340/341, 343, 355, 358, 359, 360/361, 362/363, 364/365, 368/369 & 322/323 TO BE LAID UNDER THE SWD SIMILAR TO S.C.M. (K6).  
 - CONNECTIONS TO LOTS 332/333 & 353/354, 330/331 TO BE LAID WITH A COMBINATION OF RISER OFF THE MAIN AND UNDER THE STORMWATER DRAIN SIMILAR TO S.C.M. (K5) & (K6).  
 - CONNECTION TO LOT 343 SHALL BE 150mm Dia..

**FITTINGS SCHEDULE**

Line No/Dist.	DEF. ANGLE	Fitting Item
<b>HORIZONTAL</b>		
1/24.73	-	MH
1/292.89	-	MH
1/370.88	-	MH
1/412.12	-	MH
1/438.26	-	MH
1/592.56	-	MS 225 Capped AHD.
2/23.20	17°3'	MH H-Bend 150x17xR3000
2/24.74	-	MH
2/233.10	-	MS 150
2/228.70	-	MS 150 Capped Ahd.
3/13.80	30°20'	MS 150-H-Bend 150x30°xR635 Lt.
3/80.00	-	MS 150
3/163.50	90°	MSJ 150 Lt-H-Bend 150x45°xR635 Lt.
3/196.60	-	ID Temp. End
4/41.60	-	ID End
5/52.90	-	MS 150 Capped Ahd.
<b>VERTICAL</b>		
3/164.30	6°	V-Bend 150x6°xR3000
3/173.30	6°	V-Bend 150x6°xR3000



**NOTES:**  
 (1) POSSIBLE VARIO-BEND ALTERNATIVES USING THE TWO ADAPTORS:-  
 - SOCKET/SPIGOT BEND  
 - SOCKET/SOCKET BEND  
 - SPIGOT/SPIGOT BEND  
 (2) BEND CONFIGURATION:  
 PIPES SHALL BE LAID FROM THE DOWNSTREAM END OF THE SYSTEM WITH THE SOCKET ENDS FACING UPSTREAM; WHERE POSSIBLE, BENDS CONFIGURATIONS SHALL BE CONSISTENT WITH THIS APPROACH  
 (3) BEND RADIUS:  
 - HORIZONTAL/VERTICAL BENDS RADIUS=3000mm (TO CENTRELINE).  
 - HORIZONTAL BEND IMMEDIATELY UPSTREAM OF MS RADIUS=625mm (TO CENTRELINE).



**LEGEND WASTE WATER**

Proposed Sewer: NS. EL. at I.P. 24.55, Final EL. at I.P. 23.63, Inv. EL. at I.P. 22.23

Proposed Maintenance Hole: Spot level: +0.33

Maintenance Shaft: I.O. Proposed Sewer:

Maintenance Shaft Terminal: Exist Sewer 150# at 12.00%:

Sewer Proposed in Adj. Schemes: Future Sewer: Exist Sewer Connection and Maintenance Hole Pumping Main: PM: Area not served:

Inspection Opening: Area of fill: Inspection Point: Contract Boundary:

Exist Sewer 150# at 12.00%:

Future Sewer 150# at 12.00%:

Natural Surface: Design Surface:

Rev	Date	Drn.	Description	Signature & Date
5	506.80	506.80	DN 150mm PVC SW(4)	
4	271.83	271.83	DN 225mm PVC SW(4)	

Sheet No Length Prog. Total Pipe Discription

ACTUAL

**LEGEND**  
 H-Bend = Horizontal Vario-bend  
 V-Bend = Vertical Vario-bend  
 MSE = Maintenance Shaft Elbow  
 MSJ = Maintenance Shaft Junction  
 MST = Maintenance Shaft Terminal  
 MS = Maintenance Shaft  
 MH = Maintenance Hole  
 IO = Inspection Opening

**Standard SA Water Notes:**  
 - All connections to be 9100mm UNO  
 - All easements to be 3m wide UNO  
 - Sewer to be located centrally in easement UNO  
 - Connection Locations refer SCM page K1  
 - All connections to be laid similar to K 3 & K4 UNO  
 - All lines are available both sides UNO

**FREE ASSET**

**AUTHORIZATION**  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 CHARTERED ENGINEER

**CONTRACTORS WORK SPACE**  
 LOGOS NOT PERMITTED

**AS CONSTRUCTED DETAILS**

SOIL TYPE:	CLAY
WATER TABLE:	N/A
Depth to WATER:	N/A
BEDDING:	GRAVEL
DATE CONSTRUCTED:	69-70
Field Check:	CLS
CERTIFIED BY:	CLS
DATE:	4/4/70

LICENSED SURVEYOR: \_\_\_\_\_

**CONTRACTOR / COMPANY NAME**  
**CONTACT DETAIL (PHONE No.)**

**SA Water**  
 Government of South Australia  
 This drawing is the property of the South Australian Water Corporation and shall not be copied or modified in part or in whole without authorization.

**CONSTRUCTION DRAWING RECEIVED**  
 Date: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Date: \_\_\_\_\_

CPC Issued Date: \_\_\_\_\_ CONTRACT No.: 123/69

**FOR FURTHER INFORMATION VIDE**

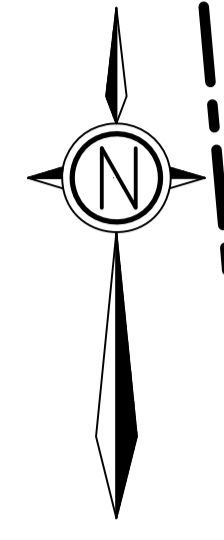
DRAINAGE AREA: Adelaide  
 COUNCIL: Adelaide  
 D.P.: \_\_\_\_\_ L.D.: 120/d345/69  
 CADASTRE REFERENCE: 6612-34-h3 G.G. Date: \_\_\_\_\_

SHEET SIZE SA WATER SOCKET NUMBER REVISION  
 A1 90123/09

**SHEET 1 OF 5**  
**DRAWING NUMBER 2069-3001-01**  
 YEAR NUMBER SHEET

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BAR CODE



LAYOUT PLAN  
0 5 10 20 30 m.

**LEGEND WASTE WATER**

Proposed Sewer: NS. EL. at I.P. 24.55, Final EL. at I.P. 23.63, Inv. EL. of I.P. 22.23  
 Proposed Maintenance Hole: Spot level  
 Maintenance Shaft: Design level  
 Maintenance Shaft Terminal: Line No. 1, Sheet No. 2  
 Sewer Proposed in Adj. Schemes: Area not served  
 Future Sewer: Area of fill  
 Existing Sewer, Connection and Maintenance Hole: Future Sewer 150# at 12.00%  
 Pumping Main: Future Sewer Natural Surface  
 Inspection Opening: Design Surface  
 Inspection Point:   
 Contract Boundary:

Maintenance Hole:   
 Maintenance Shaft:   
 Maintenance Hole Jump Up:   
 I.O.:   
 Proposed Sewer:   
 Exist Sewer:   
 Future Sewer 150# at 12.00%:   
 Future Sewer Natural Surface:   
 Design Surface:

Rev	Date	Drn.	Description	Signature & Date

Amendment -

Rev	Date	Drn.	Description

Sheet No Length Prog. Total Pipe Description ACTUAL

**LEGEND**

Standard SA Water Notes:

- All connections to be 910mm UNO
- All easements to be 3m wide UNO
- Sewer to be located centrally in easement UNO
- Connection Locations refer SCM page K1
- All connections to be laid similar to K 3 & K4 UNO
- All lines are available both sides UNO

**FREE ASSET**

**AUTHORIZATION**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_

CHARTERED ENGINEER

**AS CONSTRUCTED DETAILS**

SOIL TYPE :	CLAY
WATER TABLE :	N/A Depth to WATER : N/A
BEDDING :	GRAVEL
DATE CONSTRUCTED :	69-70
Field Check :	CLS
CERTIFIED BY :	CLS DATE : 4/4/70

LICENSED SURVEYOR :

**CONTRACTOR / COMPANY NAME**  
**CONTACT DETAIL (PHONE No.)**

**SOMEWHERE SOUTH**  
**STAGE Z**  
**SEWER IN MARITIME RD, TIDE ST, ATLANTIS AV,**  
**& EASEMENT**  
**LAYOUT PLAN**

CONTRACTORS WORK SPACE  
 LOGOS NOT PERMITTED

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**CONSTRUCTION DRAWING RECEIVED**  
 Date : \_\_\_\_\_  
 Field Check : \_\_\_\_\_  
 Date : \_\_\_\_\_

CPC Issued Date : \_\_\_\_\_ CONTRACT No. : 123/69

FOR FURTHER INFORMATION VIDE

DRAINAGE AREA : Adelaide  
 COUNCIL : Adelaide

D.P. : \_\_\_\_\_ L.D. : 120d345/69  
 CADASTRE REFERENCE : 6612-34-h3 G.G. Date : \_\_\_\_\_

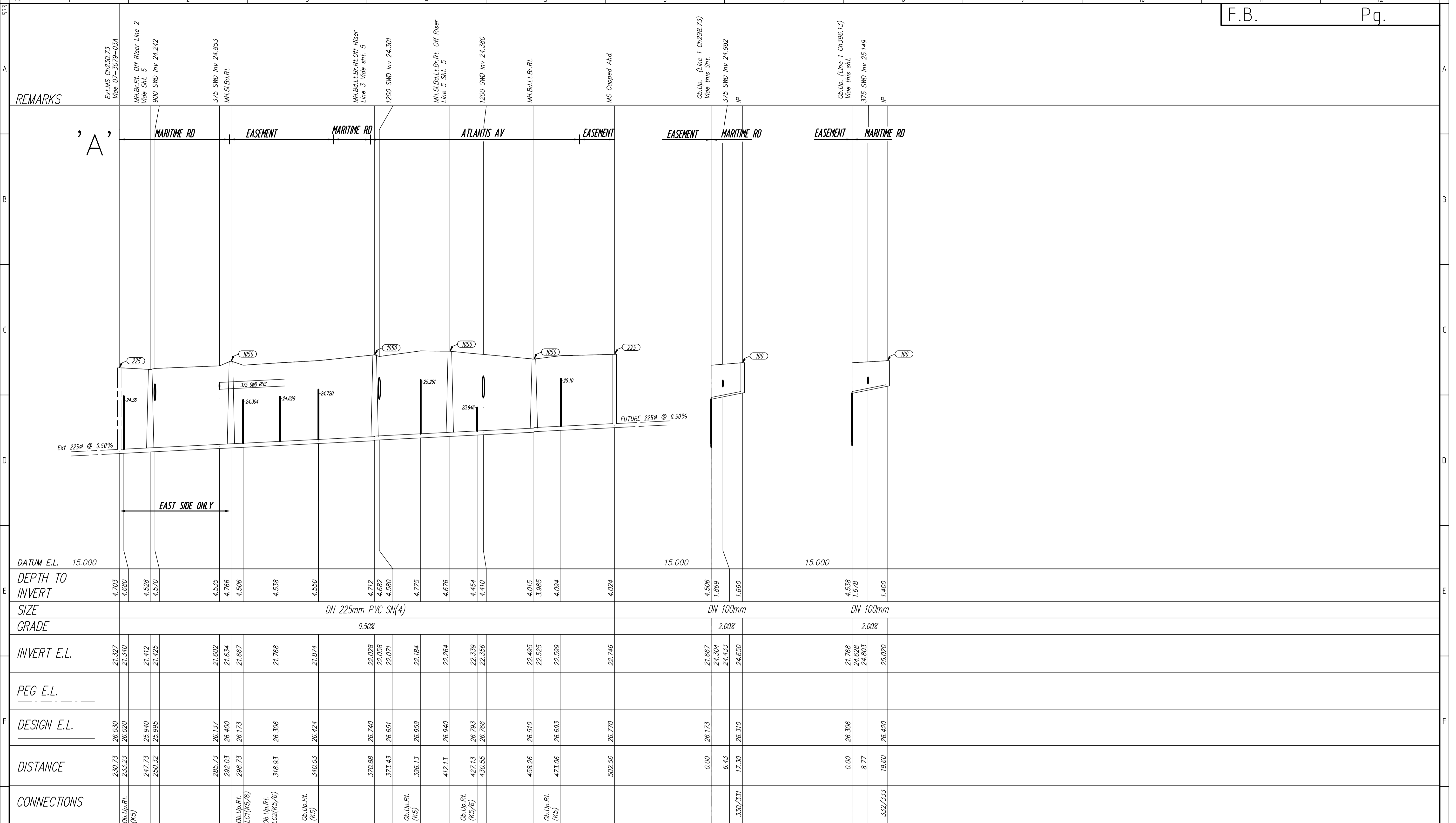
SHEET SIZE SA WATER DCKET NUMBER REVISION  
 A1 90123/09  
 SHEET 2 OF 5  
 DRAWING NUMBER  
**2069-3001-02**  
 YEAR NUMBER SHEET

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REMARKS	DATE	DRN.	DESCRIPTION	SIGNATURE	DATE
4	271.83	271.83	DN 225mm. PVC SN(4)		

AS CONSTRUCTED DETAILS	SA WATER	
SOIL TYPE : CLAY	<p>Government of South Australia This drawing is the property of the South Australian Water Corporation and shall not be copied or modified in part or in whole without authorization.</p>	
WATER TABLE : N/A		DEPTH TO WATER : N/A
BEDDING : GRAVEL		
DATE CONSTRUCTED : 69-70		
CERTIFIED BY : CLS	DATE : 4/4/70	
CONTRACTOR / COMPANY NAME CONTACT DETAIL (PHONE No.)		
SOMEWHERE SOUTH STAGE Z SEWER IN MARITIME RD, TIDE ST, ATLANTIS AV & EASEMENT LONGITUDINAL SECTIONS		

AMENDMENT	REV	DATE	DRN.	DESCRIPTION
4	271.83	271.83	DN 225mm. PVC SN(4)	

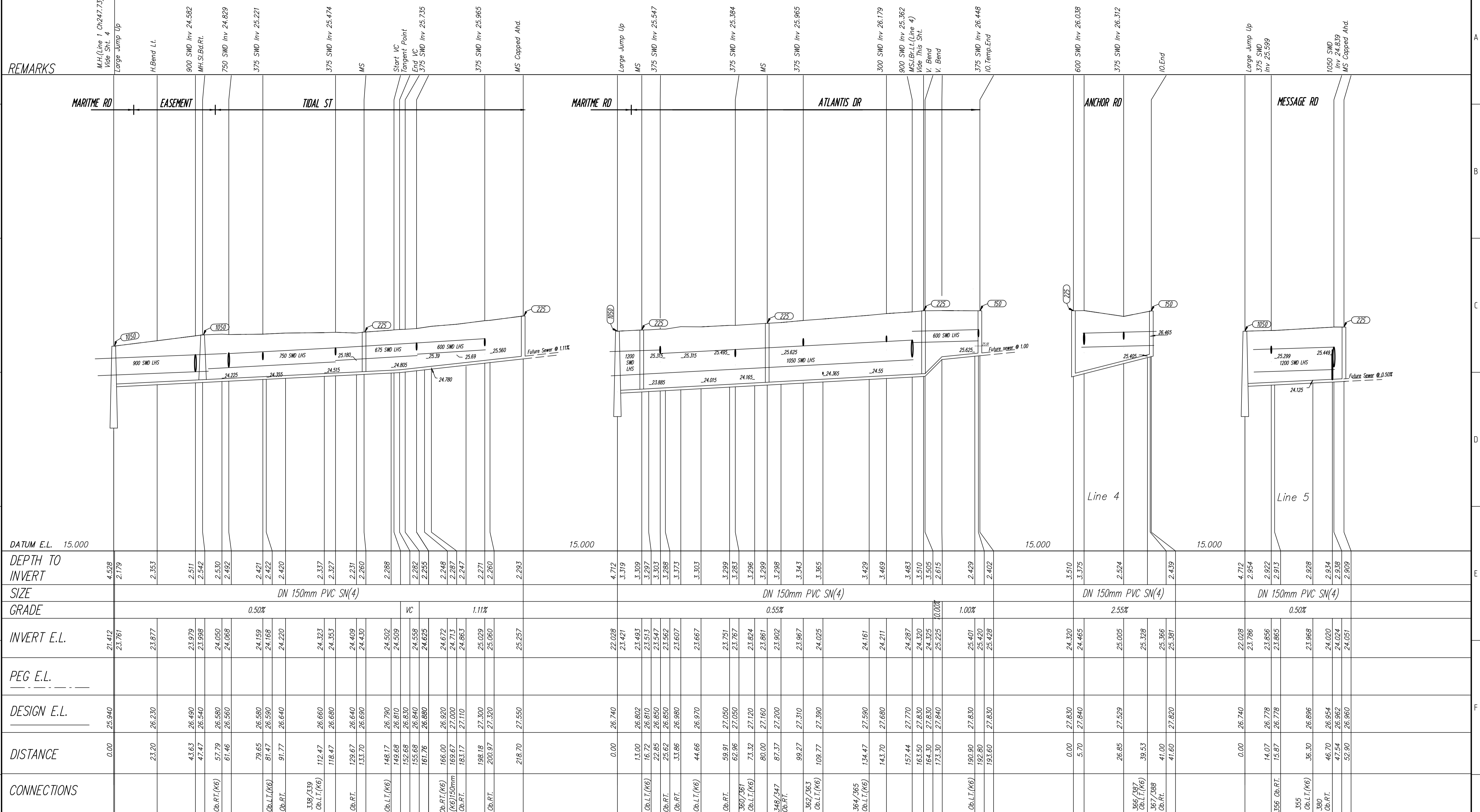
  

CONTRACTORS WORK SPACE	LOGOS NOT PERMITTED	CHARTERED ENGINEER
SHEET SIZE SA WATER DCKET NUMBER A1 90123/09 SHEET 4 OF 5 DRAWING NUMBER <b>2069-3001-04</b> YEAR NUMBER SHEET		

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DATE	DESCRIPTION	BY	CHKD

**LEGEND**

**WASTE WATER**

- Proposed Sewer
- Proposed Maintenance Hole
- Maintenance Shaft
- Maintenance Shaft Terminal
- Sewer Proposed in Adj. Schemes
- Future Sewer
- Existing Sewer, Connection and Maintenance Hole
- Pumping Main
- Inspection Opening
- Inspection Point
- Contract Boundary

NS. EL. at I.P.  
Final EL. at I.P.  
Inv. EL. of I.P.

Spot level

Design level

Line No.  
Sheet No.

Area not served

Area of fill

Maintenance Hole

Maintenance Shaft

Maintenance Hole Jump Up

I.O.

Proposed Sewer

Exist Sewer 150# at 12.00%

Future Sewer 150# at 12.00%

Natural Surface

Design Surface

Rev	Date	Drn.	Description

Easement to be taken on final plan of division

Easement Or Land To Be Acquired

Reference For Acquisition

Special Conditions

Signature & Date

Amendment -

Rev	Date	Drn.	Description
5	506.80	506.80	DN 150 PVC SN(4)

Sheet No Length Prog. Total Pipe Discription

ACTUAL

**LEGEND**

Standard SA Water Notes:

- All connections to be #100mm UNO
- All easements to be 3m wide UNO
- Sewer to be located centrally in easement UNO
- Connection Locations refer SCM page K1
- All connections to be laid similar to K 3 & K4 UNO
- All lines are available both sides UNO

**FREE ASSET**

**AUTHORIZATION**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_

CHARTERED ENGINEER

CONTRACTORS WORK SPACE

LOGOS NOT PERMITTED

**AS CONSTRUCTED DETAILS**

SOIL TYPE: CLAY

WATER TABLE: N/A Depth to WATER: N/A

BEDDING: GRAVEL

DATE CONSTRUCTED: 69-70

Field Check: CLS

CERTIFIED BY: CLS DATE: 4/4/70

LICENSED SURVEYOR: \_\_\_\_\_

CONTRACTOR / COMPANY NAME  
CONTACT DETAIL (PHONE No.)

**SOMEWHERE SOUTH  
STAGE Z  
SEWER IN MARITIME RD, TIDE ST, ATLANTIS AV,  
ANCHOR RD, MESSAGE RD & EASEMENT  
LONGITUDINAL SECTIONS**

SA Water

Government of South Australia

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COUNCIL: Adelaide

D.P.: \_\_\_\_\_ L.D.: 120/d345/69

CADASTRE REFERENCE: 6612-34-h3 G.G. Date: \_\_\_\_\_

SHEET SIZE SA WATER DCKET NUMBER REVISION

A1 90123/09

SHEET 5 OF 5

DRAWING NUMBER  
**2069-3001-05**

YEAR NUMBER SHEET

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