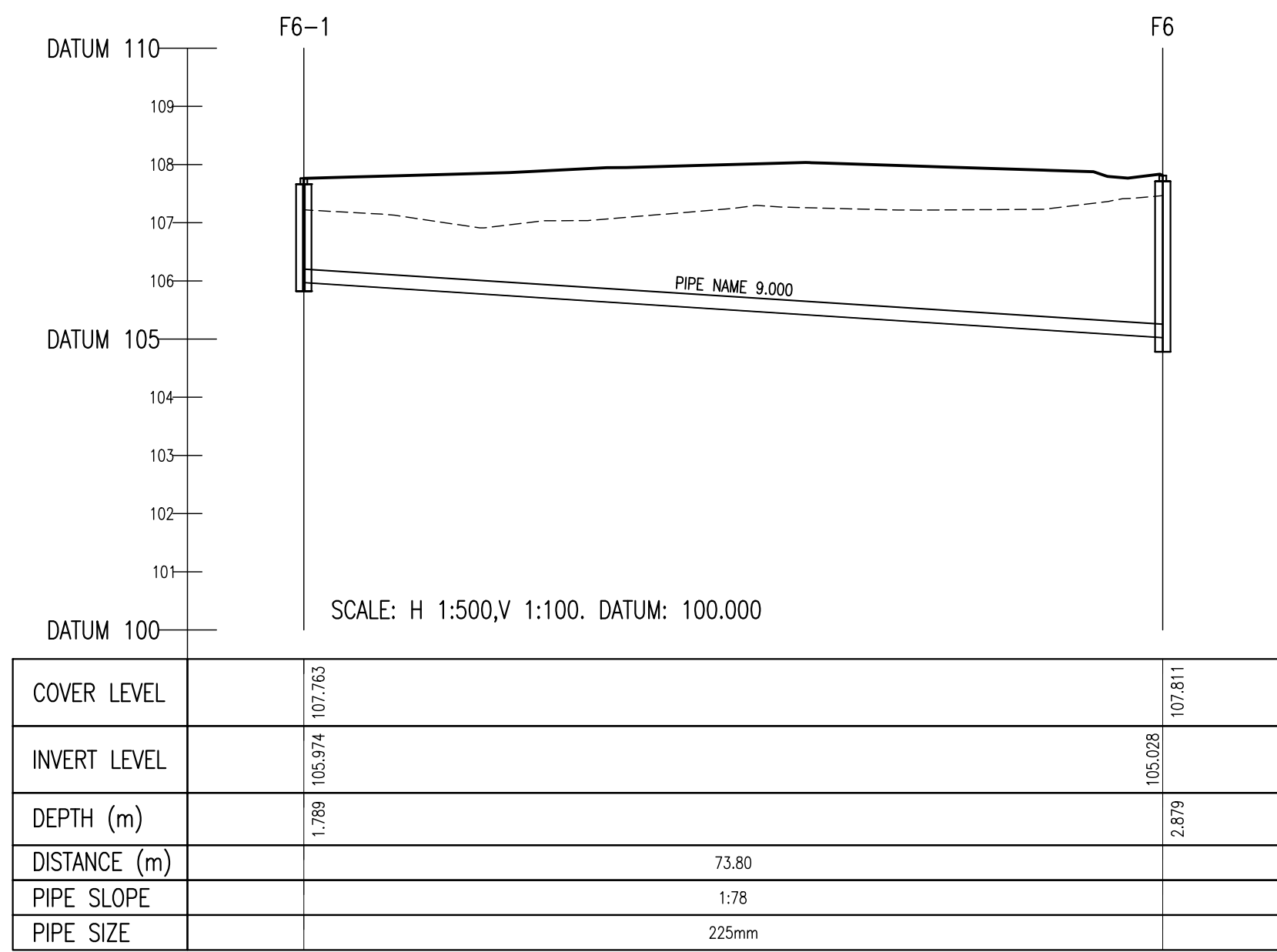
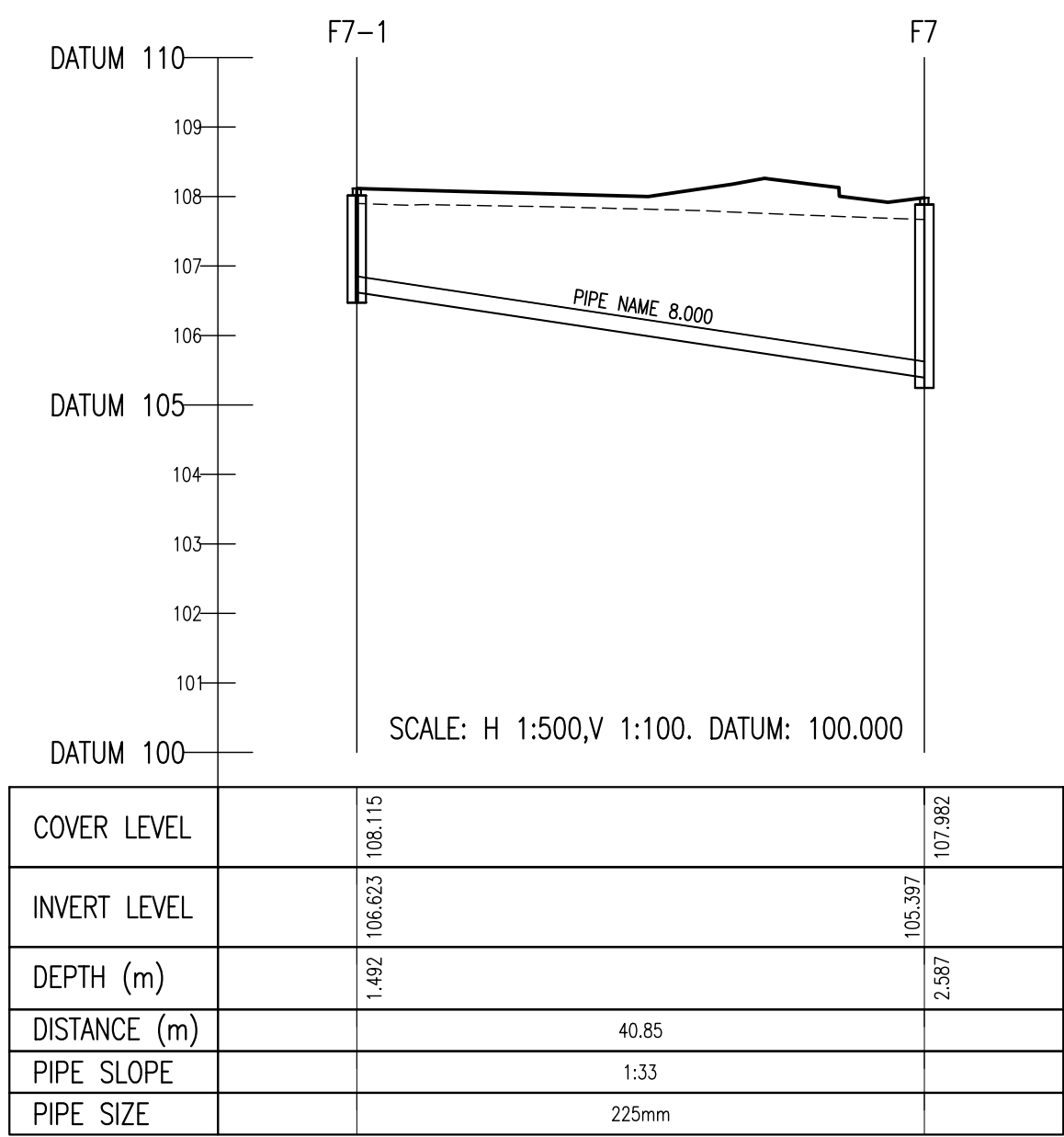
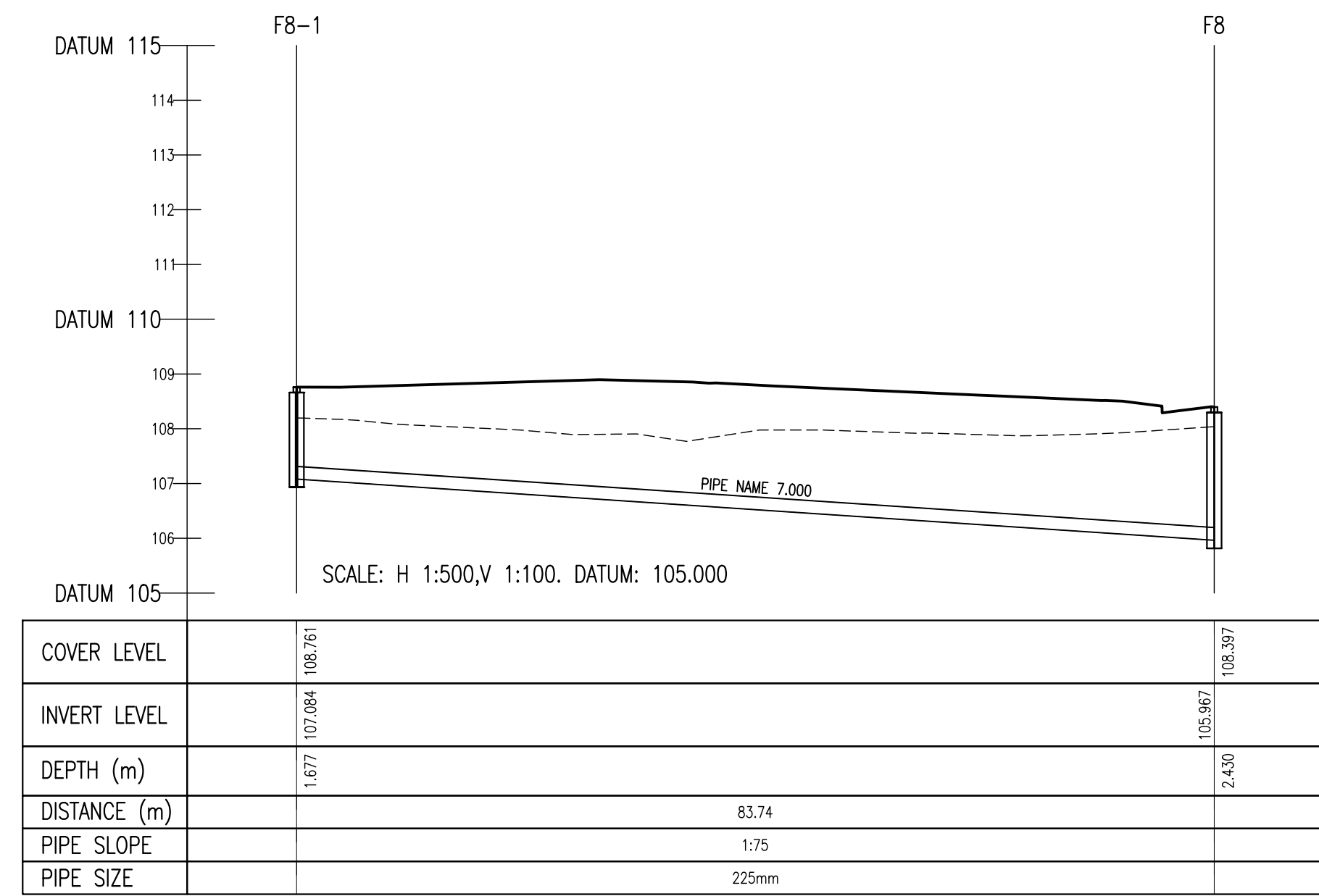
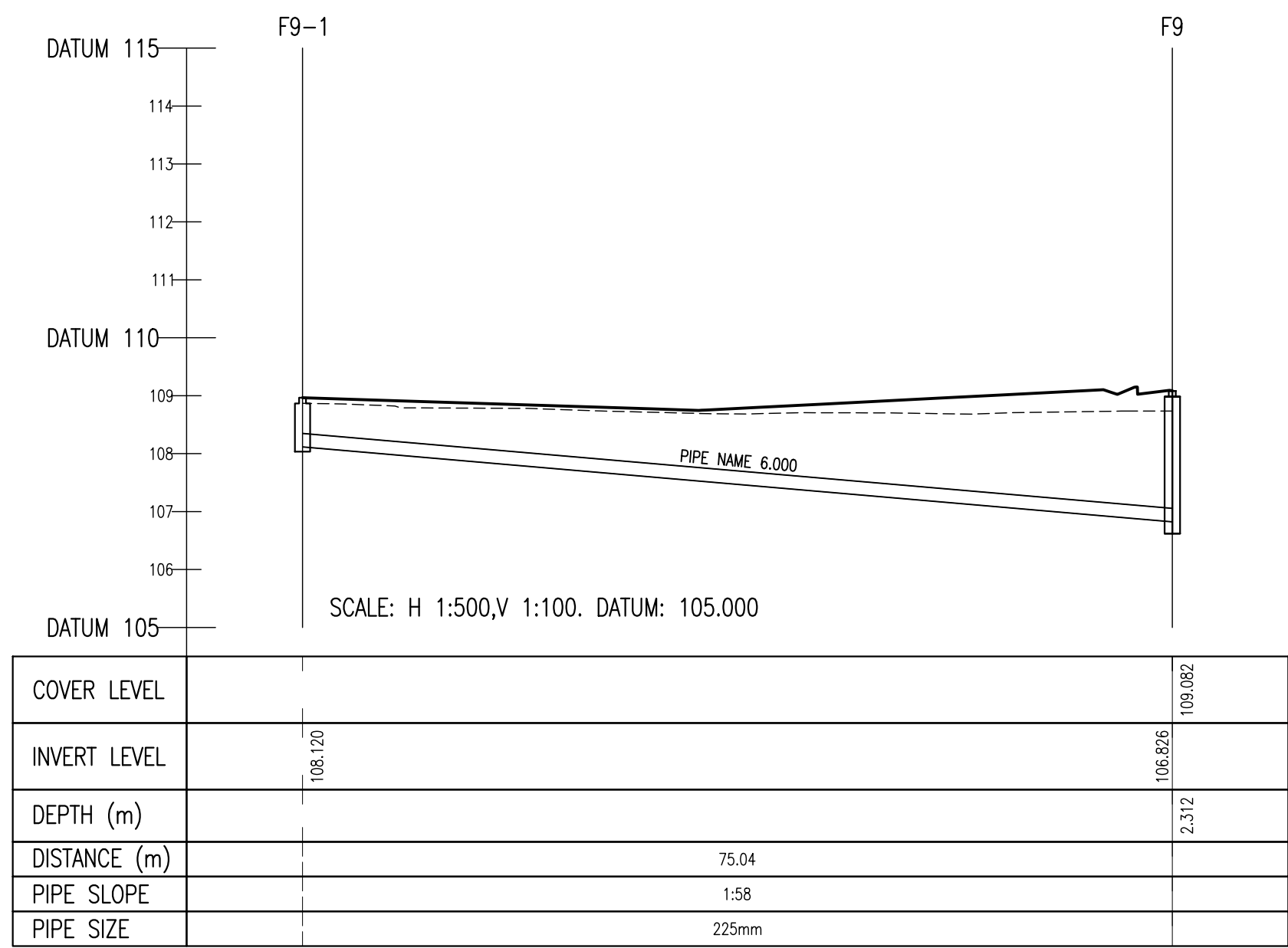
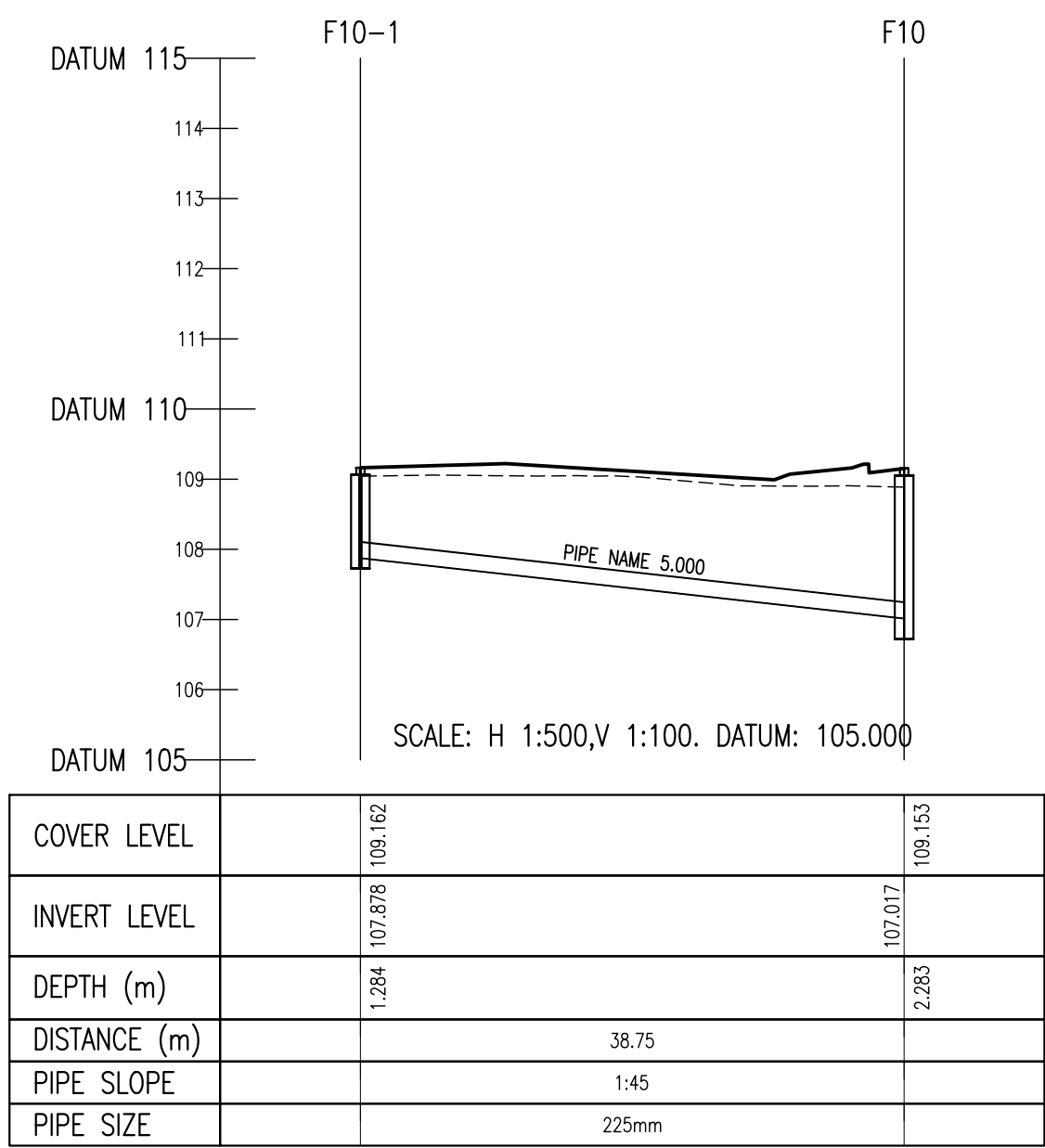
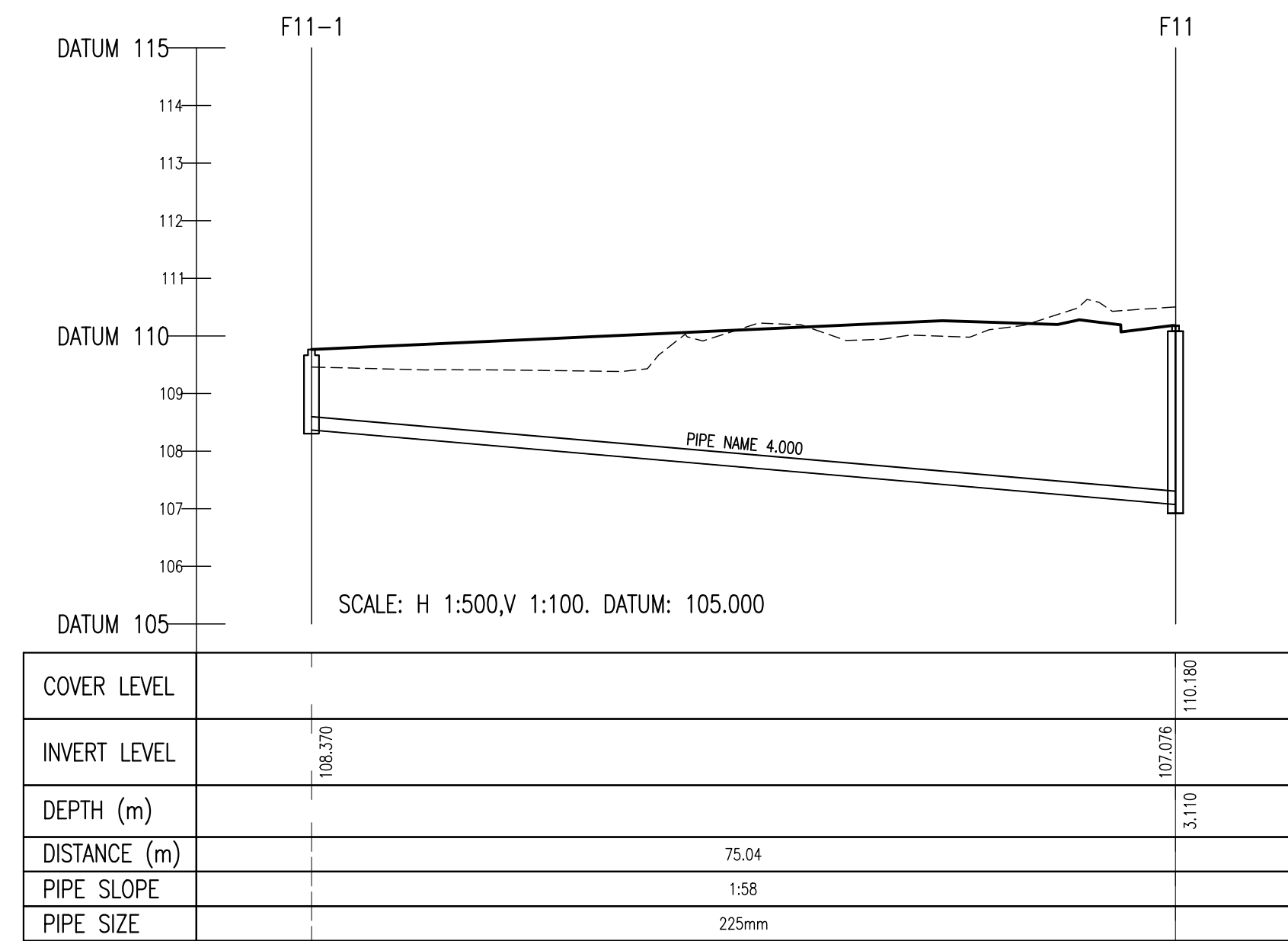
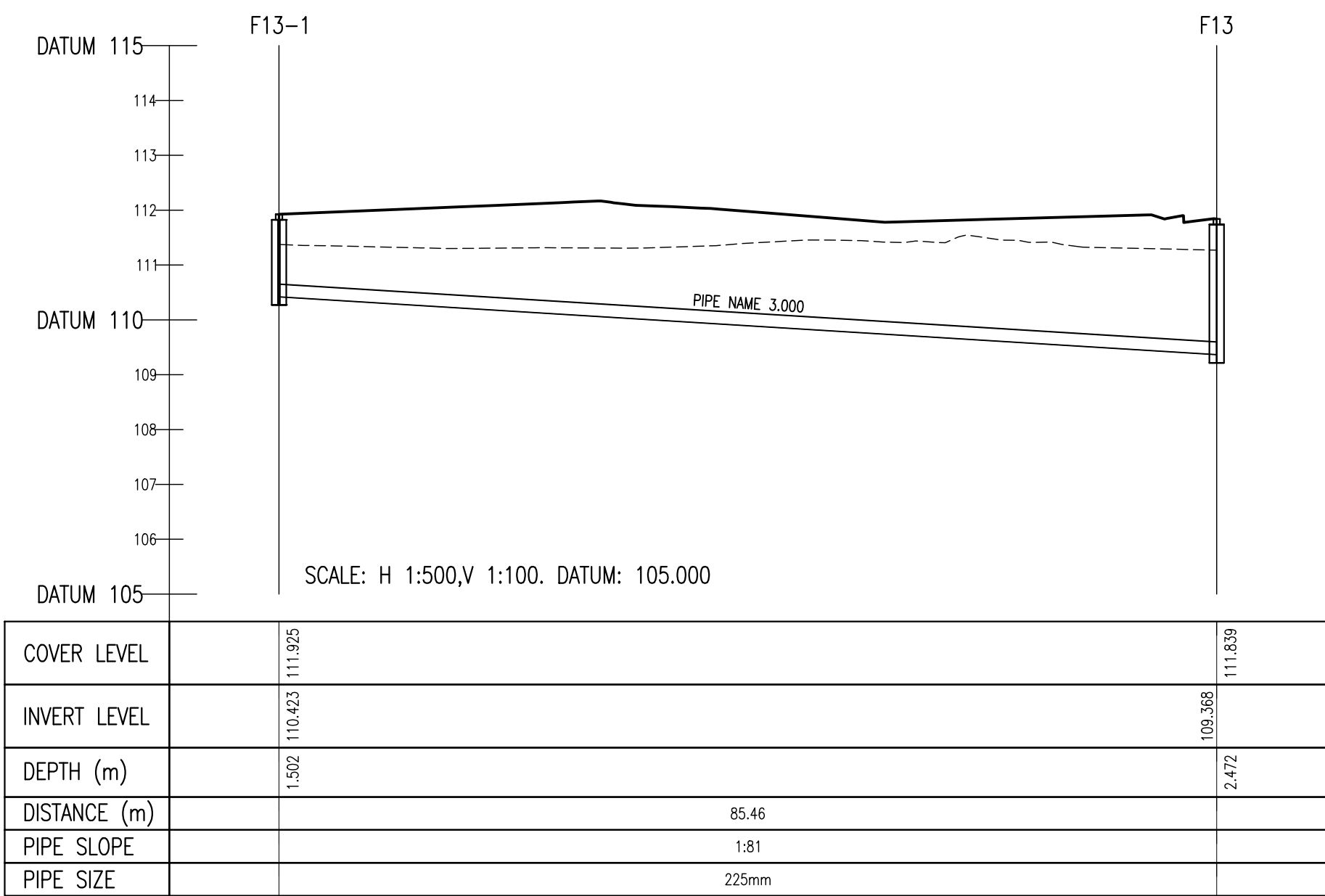
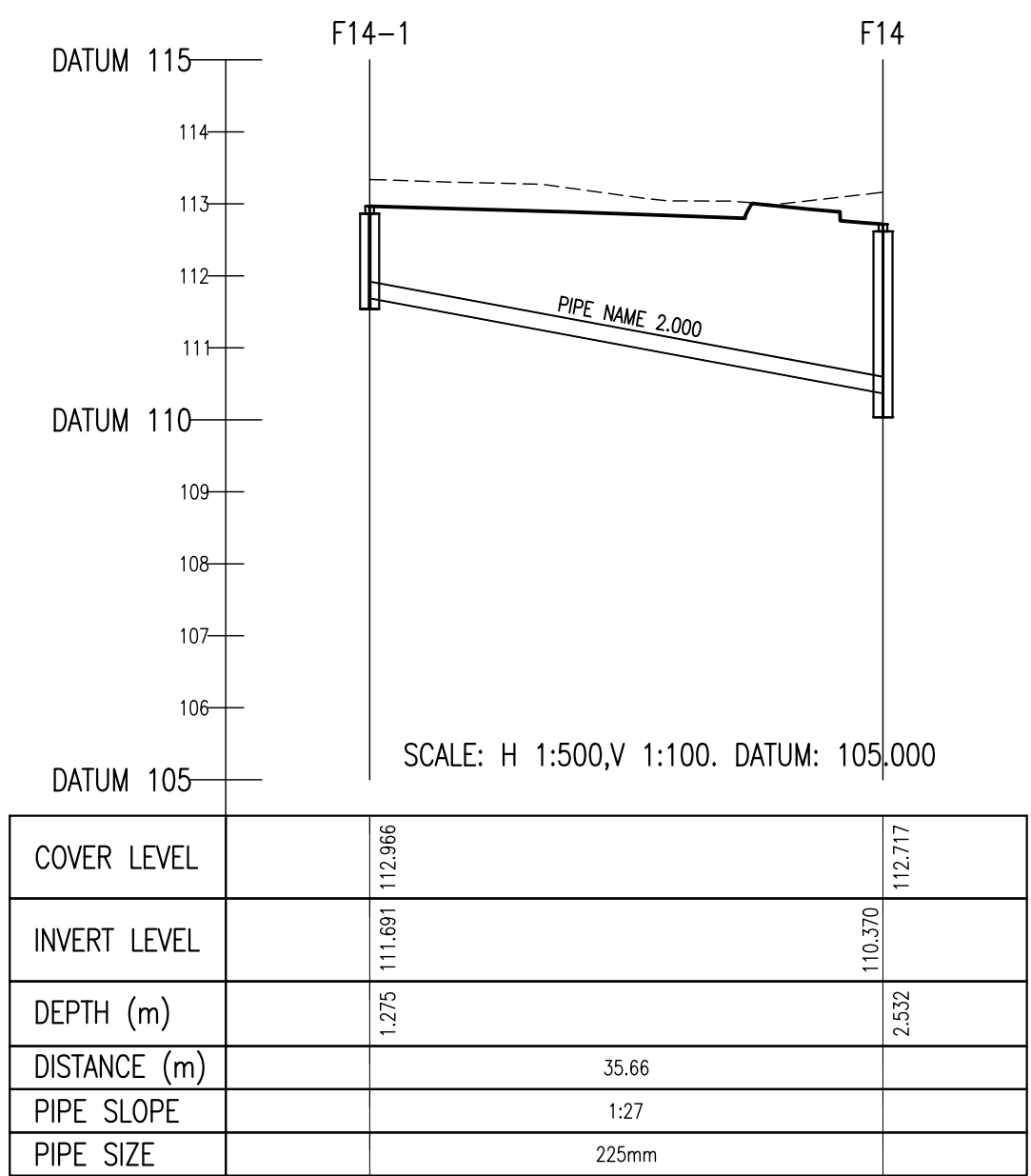


FORTUNESTOWN LANE & GARTERS LANE
RESIDENTIAL DEVELOPMENT

CIVILS DRAWINGS
DECEMBER 2017
PLANNING

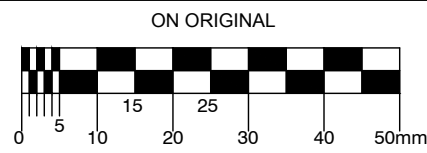
Sheet List Table

Sheet Number	Sheet Title	Sheet Scale
3071	Foul Water Long Sections Sheet 1 of 6	AS SHOWN
3072	Foul Water Long Sections Sheet 2 of 6	AS SHOWN
3073	Foul Water Long Sections Sheet 3 of 6	AS SHOWN
3074	Foul Water Long Sections Sheet 4 of 6	AS SHOWN
3075	Foul Water Long Sections Sheet 5 of 6	AS SHOWN
3076	Foul Water Long Sections Sheet 6 of 6	AS SHOWN
3081	Surface Water Long Section Sheet 1 of 7	AS SHOWN
3082	Surface Water Long Section Sheet 2 of 7	AS SHOWN
3083	Surface Water Long Section Sheet 3 of 7	AS SHOWN
3084	Surface Water Long Section Sheet 4 of 7	AS SHOWN
3085	Surface Water Long Section Sheet 5 of 7	AS SHOWN
3086	Surface Water Long Section Sheet 6 of 7	AS SHOWN
3087	Surface Water Long Section Sheet 7 of 7	AS SHOWN



WHEN SECTIONS ARE VIEWED AT A3 SIZE
HORIZONTAL SCALE IS 1:1000 AND VERTICAL SCALE IS 1:200

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KEY

- EXISTING GROUND PROFILE
----- PROPOSED GROUND PROFILE

A	19/12/17	FINAL SUBMISSION, AN BORD PLEANALA	PPK	DMW
REV.	DATE	DESCRIPTION	BY	CHKD.

PLANNING

DESIGNED	DG	PREPARED	PPK
DATE	JULY 2017	CHECKED	DMW



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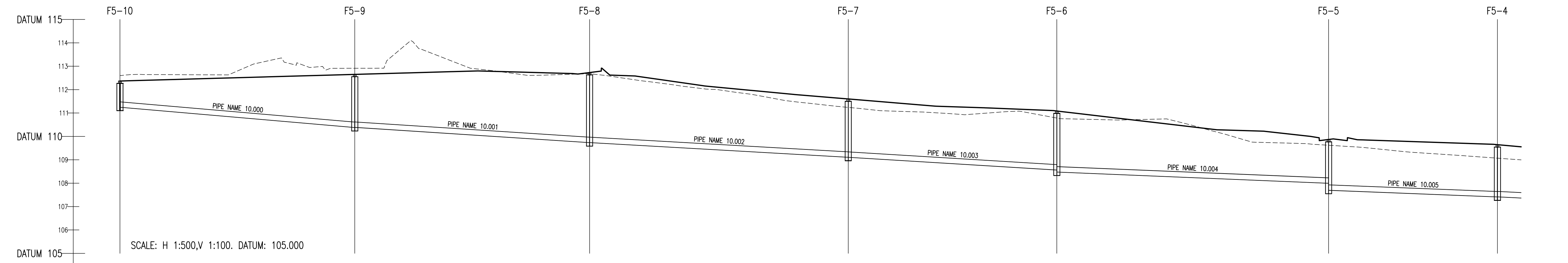
PROJECT
**FORTUNESTOWN LANE &
GARTERS LANE RESIDENTIAL
DEVELOPMENT**

DRG. TITLE
**FOUL WATER
LONG SECTIONS
SHEET 2 OF 6**

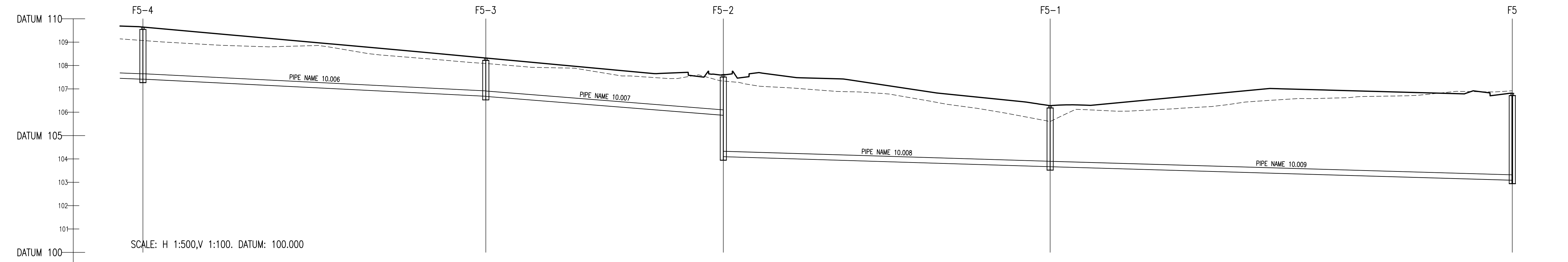
CLIENT
GREENACRE RESIDENTIAL DAC

SCALE AS SHOWN @A1 FILE REF. 162073-3071

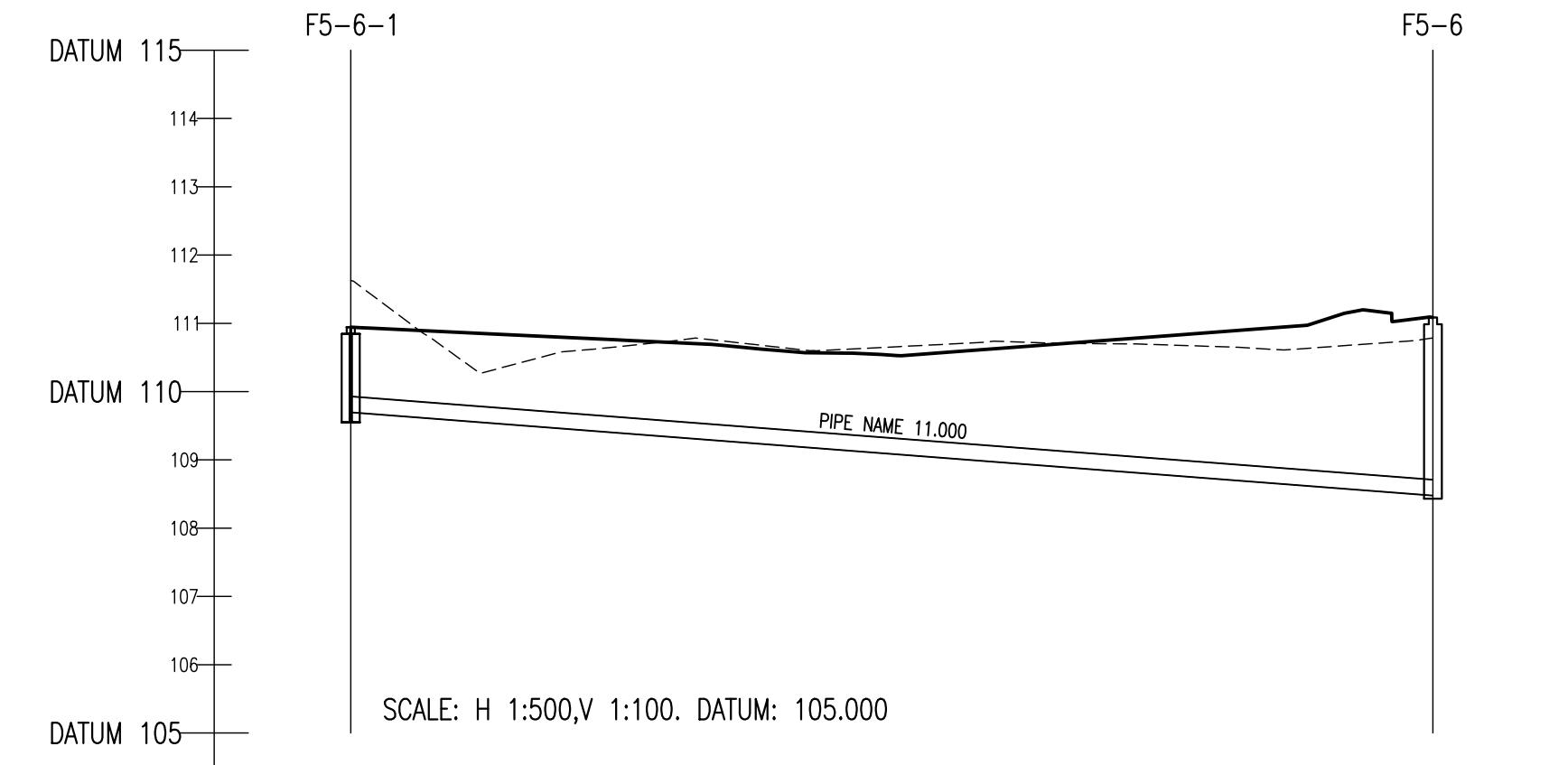
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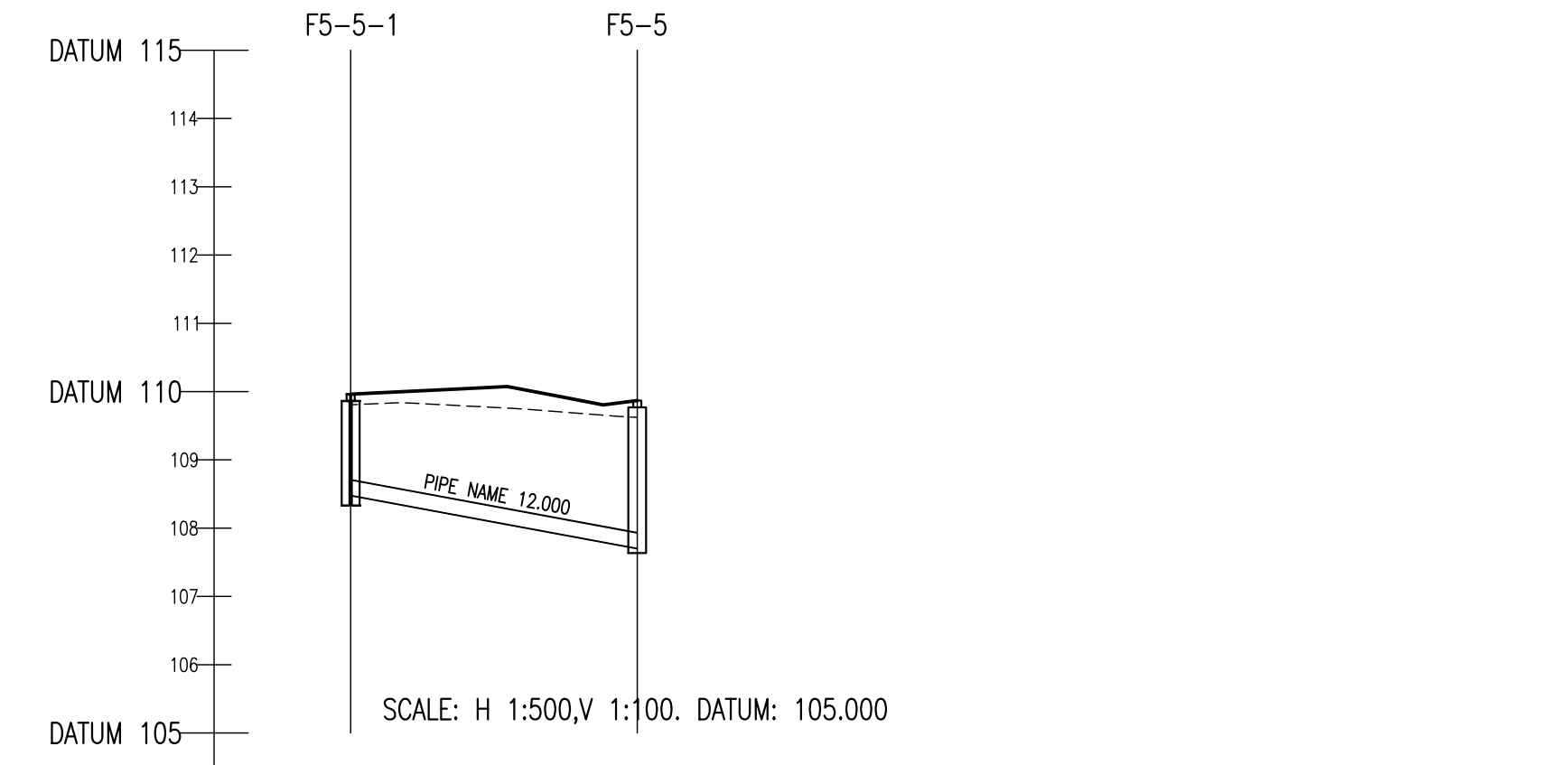
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INVERT LEVEL		111.250		110.383		109.737		109.111		108.566		107.991
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DISTANCE (m)			50.27		50.27		55.38		44.65		58.19	36.15
PIPE SLOPE			1:58		1:77		1:88		1:82		1:121	1:127
PIPE SIZE			225mm		225mm		225mm		225mm		225mm	225mm



COVER LEVEL		107.700										
INVERT LEVEL		107.416		106.686		105.873		105.671		105.670		103.891
DEPTH (m)		2.231		1.641		3.510		2.612		103.670		3.770
DISTANCE (m)			73.41		50.85		69.97		98.94			
PIPE SLOPE		1:127		1:100		1:63		1:163		1:171		
PIPE SIZE		225mm		225mm		225mm		225mm		225mm		

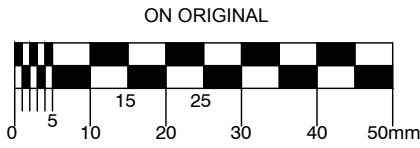


COVER LEVEL		110.944		
INVERT LEVEL		109.700		108.481
DEPTH (m)		1.244		
DISTANCE (m)			79.24	
PIPE SLOPE			1:65	
PIPE SIZE			225mm	



COVER LEVEL		109.963		
INVERT LEVEL		108.480		107.704
DEPTH (m)		1.483		
DISTANCE (m)			20.99	
PIPE SLOPE			1:27	
PIPE SIZE			225mm	

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KEY

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———— PROPOSED GROUND PROFILE

A	19/12/17	FINAL SUBMISSION, AN BORD PLEANALA	PPK	DMW
REV.	DATE	DESCRIPTION	BY	CHKD.
PLANNING				
DESIGNED	DG	PREPARED	PPK	
DATE	JULY 2017	CHECKED	DMW	
 DBFL Consulting Engineers DUBLIN OFFICE: Ormond House, Upper Ormond Quay, Dublin 7, Ireland. PHONE +353 1 400 4000 FAX +353 1 400 4050 WATERFORD OFFICE: Unit 2, The Chandlery, 1-2 O'Connell Street, Waterford, Ireland. PHONE +353 51 309 500 FAX +353 51 844 913 E-MAIL: info@dbfl.ie SITE: www.dbfl.ie				

PROJECT
FORTUNESTOWN LANE & GARTERS LANE RESIDENTIAL DEVELOPMENT

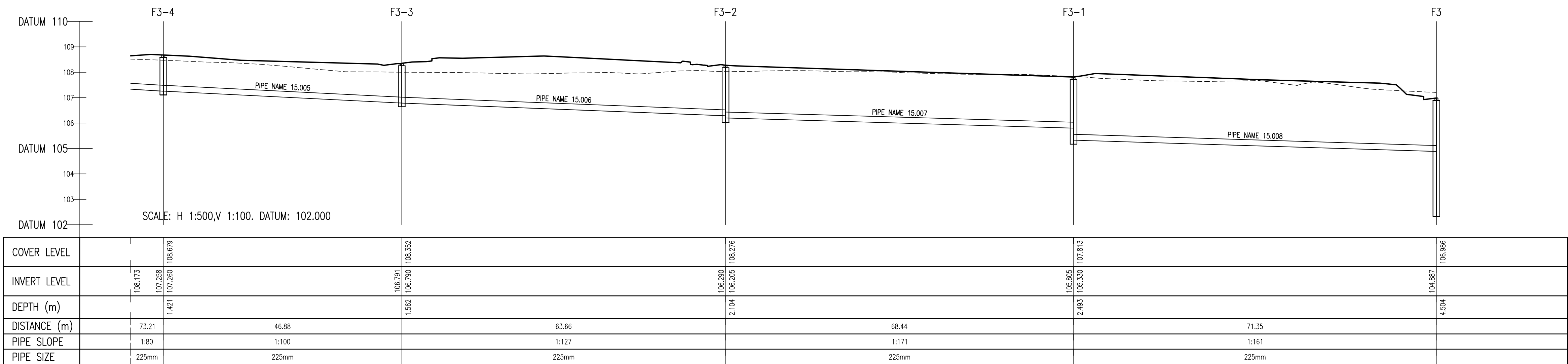
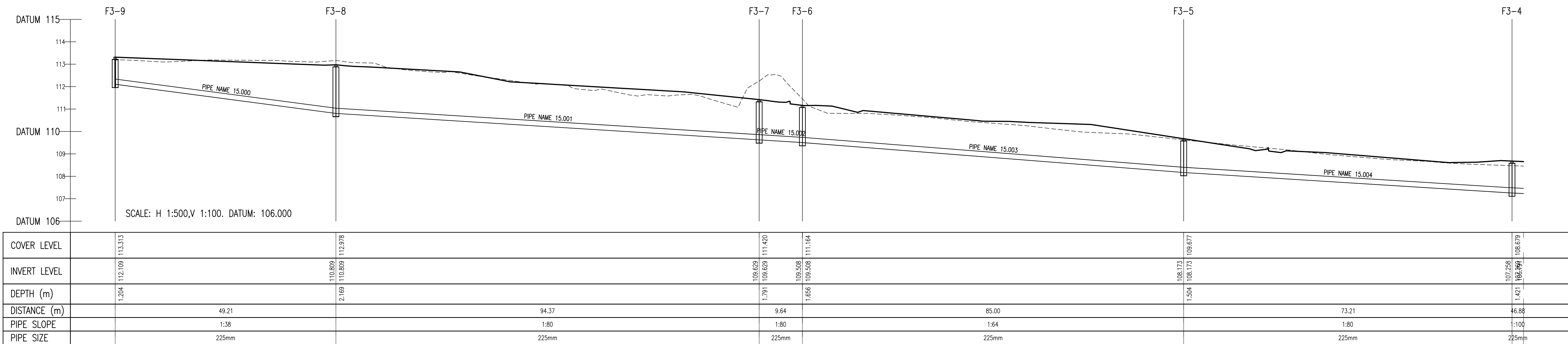
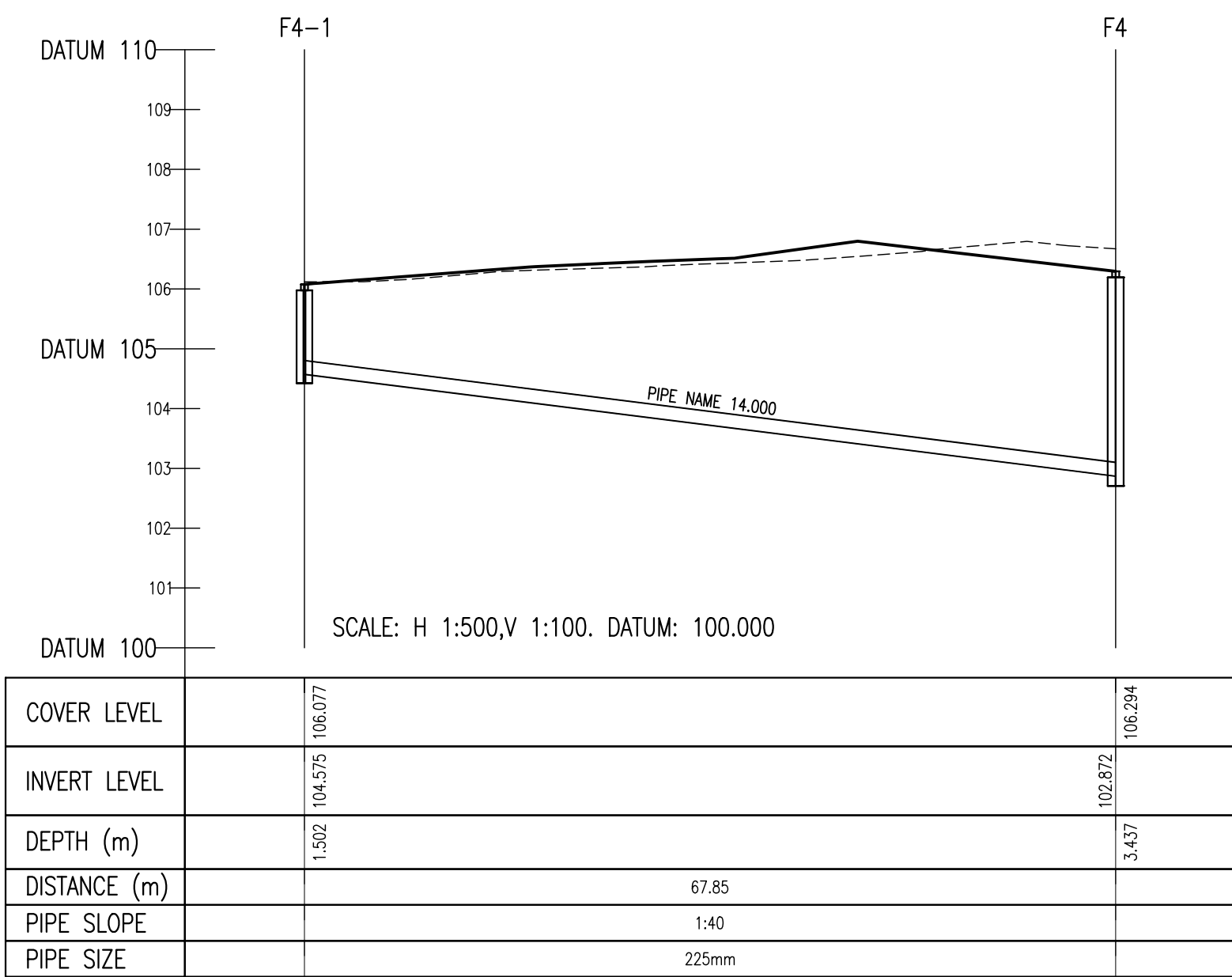
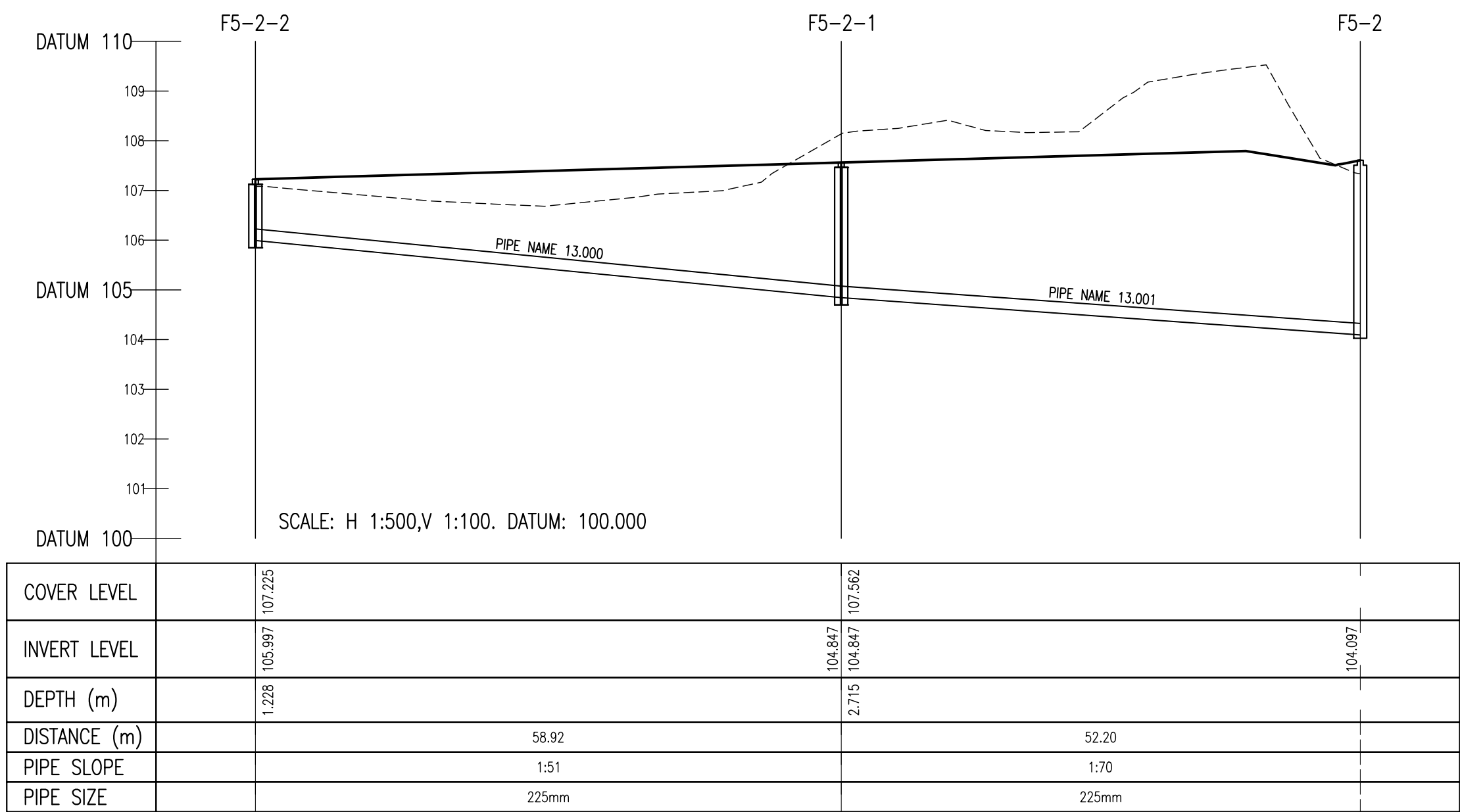
DRG. TITLE
FOUL WATER LONG SECTIONS SHEET 3 OF 6

CLIENT
GREENACRE RESIDENTIAL DAC

SCALE AS SHOWN @A1 FILE REF. 162073-3071

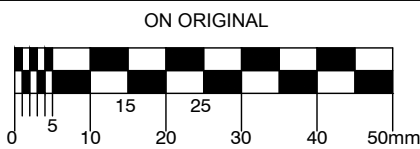
DRG. NO. **162073-3073** A

WHEN SECTIONS ARE VIEWED AT A3 SIZE
HORIZONTAL SCALE IS 1:1000 AND VERTICAL SCALE IS 1:200



WHEN SECTIONS ARE VIEWED AT A3 SIZE
HORIZONTAL SCALE IS 1:1000 AND VERTICAL SCALE IS 1:200

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REV.	DATE	DESCRIPTION	BY	CHKD.
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PLANNING

DESIGNED	DG	PREPARED	PPK
DATE	JULY 2017	CHECKED	DMW

DBFL

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PROJECT

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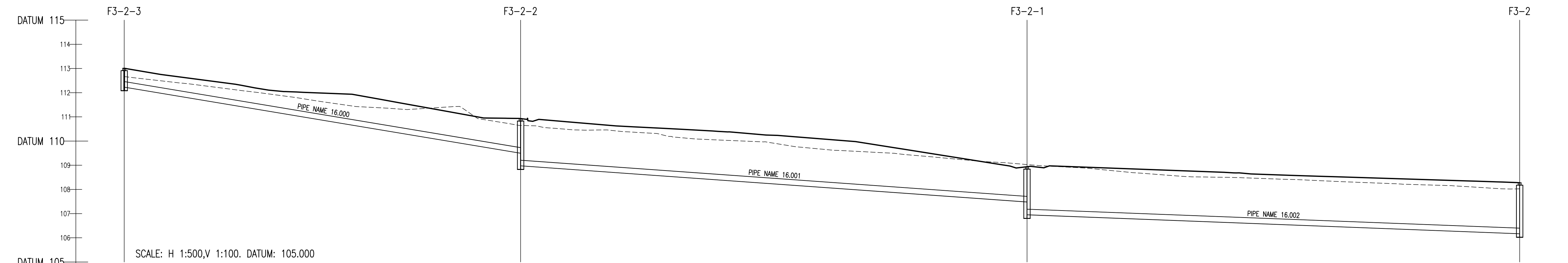
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FOUL WATER LONG SECTIONS SHEET 4 OF 6

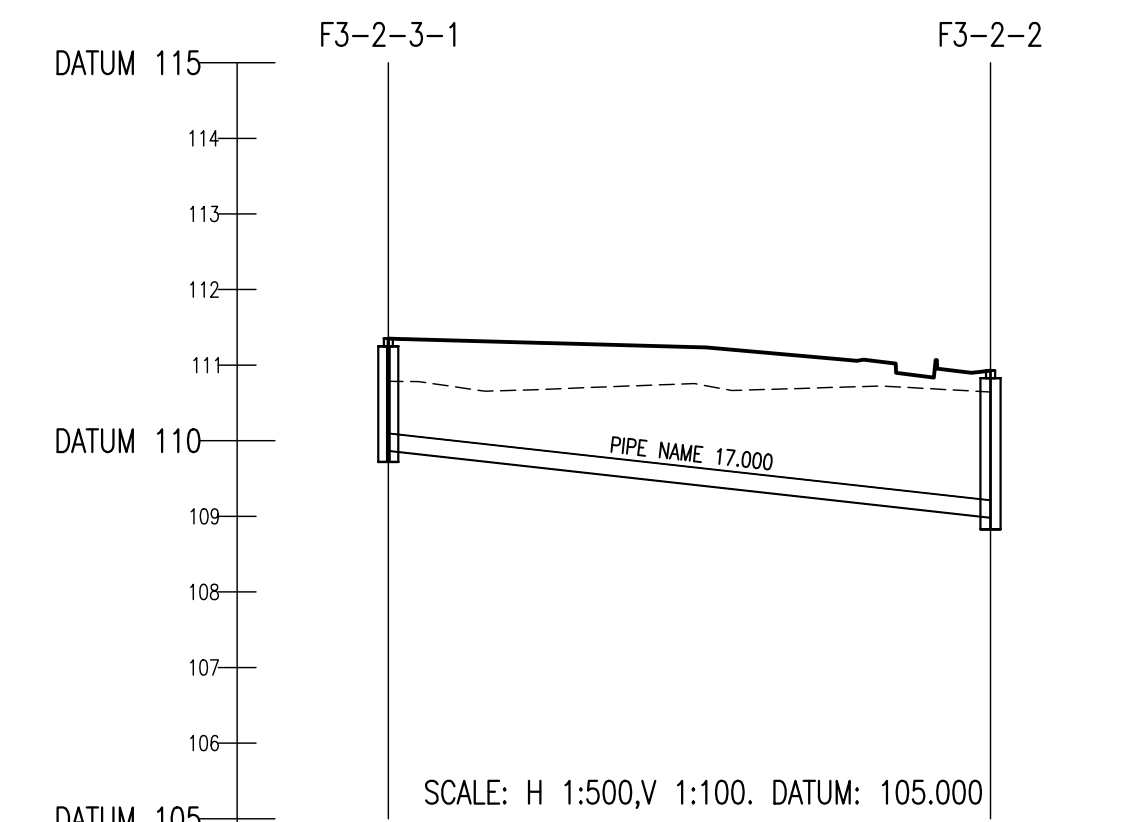
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GREENACRE RESIDENTIAL DAC

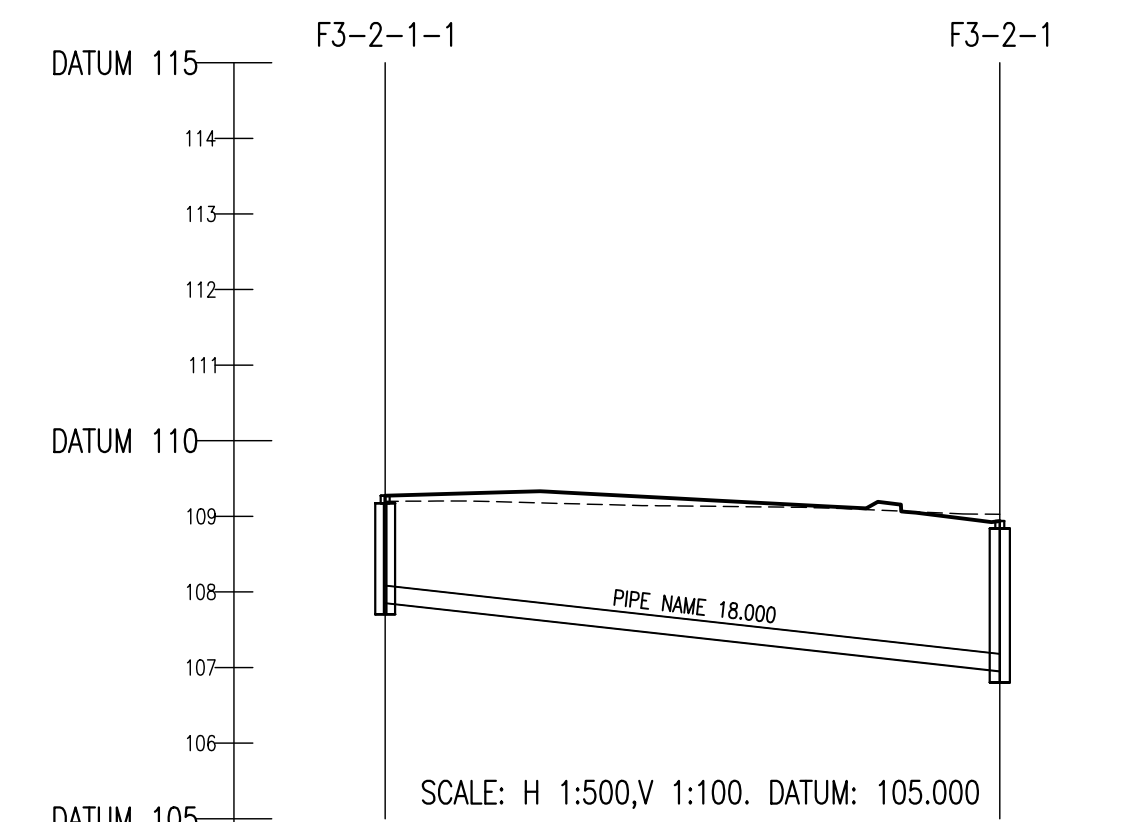
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DRG. NO.	162073-3074		A



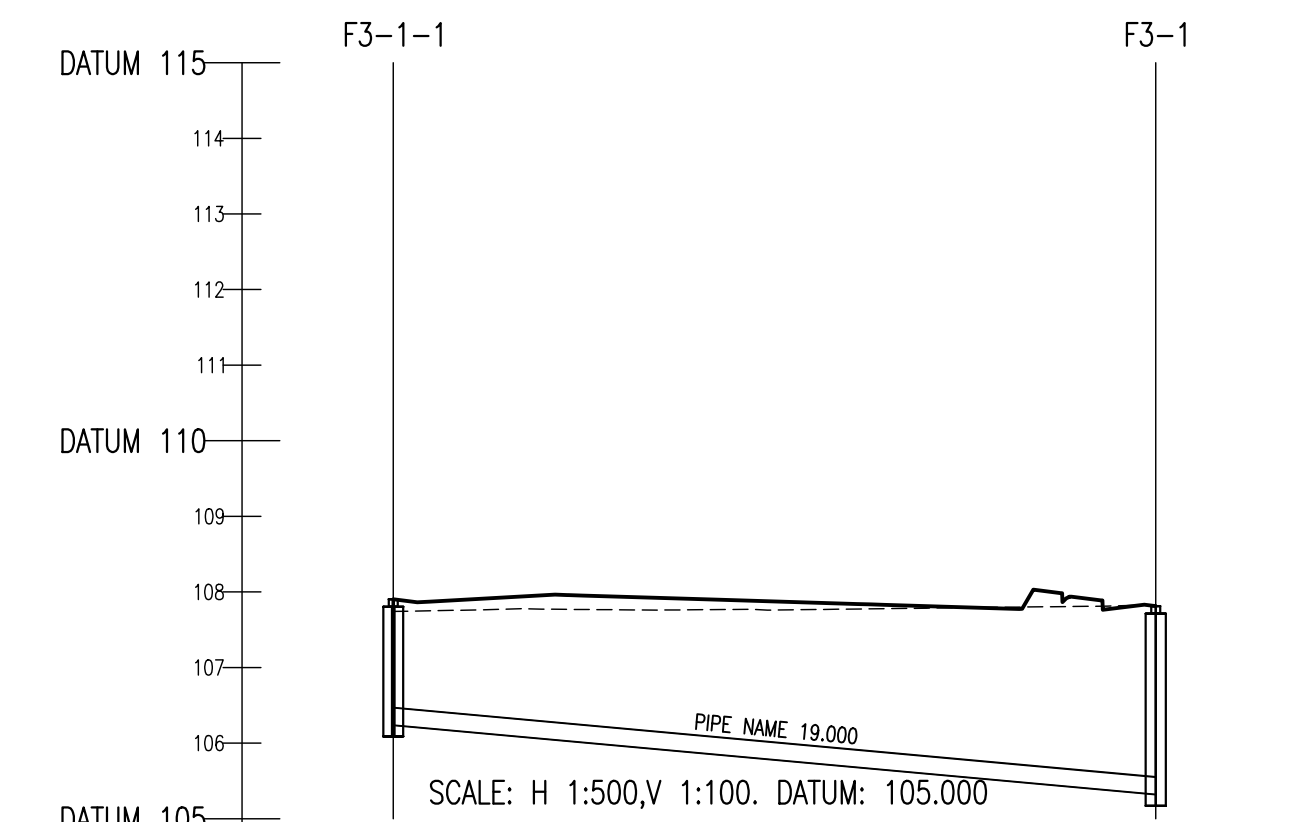
COVER LEVEL		113.010							
INVERT LEVEL		112.232		109.500	108.979	110.929		107.484	106.955
DEPTH (m)		0.778		1.500	1.986	1.986		1.986	1.986
DISTANCE (m)			81.96			104.70			101.86
PIPE SLOPE			1:30			1:70			1:130
PIPE SIZE			225mm			225mm			225mm



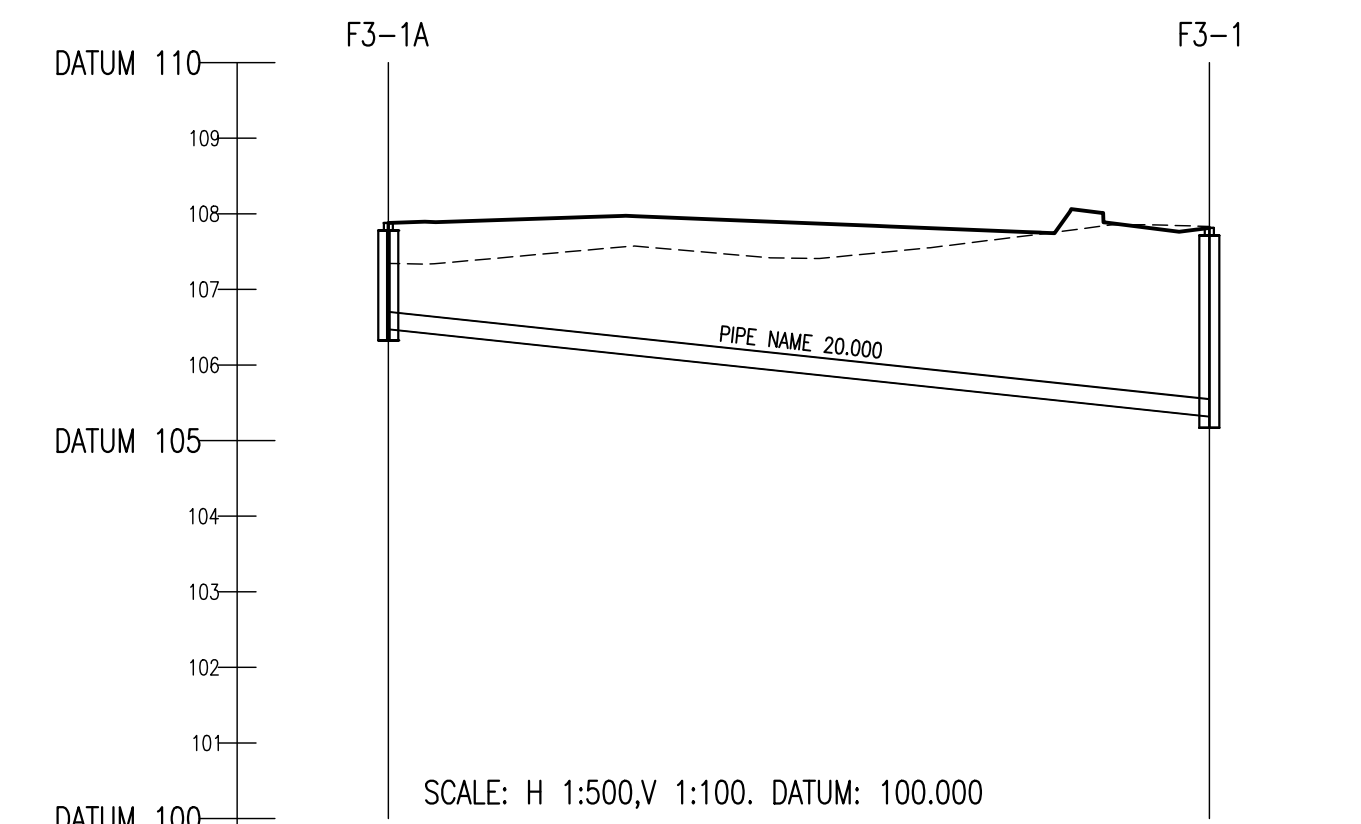
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INVERT LEVEL		109.889		108.984	110.929
DEPTH (m)		1.441		1.945	1.945
DISTANCE (m)			39.83		
PIPE SLOPE			1:45		
PIPE SIZE			225mm		



COVER LEVEL		109.273			
INVERT LEVEL		107.855		106.952	108.938
DEPTH (m)		1.418		1.986	1.986
DISTANCE (m)			40.65		
PIPE SLOPE			1:45		
PIPE SIZE			225mm		

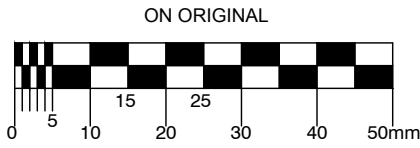


COVER LEVEL		107.904			
INVERT LEVEL		106.240		105.323	107.813
DEPTH (m)		1.664		2.483	2.483
DISTANCE (m)			50.43		
PIPE SLOPE			1:55		
PIPE SIZE			225mm		



COVER LEVEL		107.880			
INVERT LEVEL		106.475		105.305	107.813
DEPTH (m)		1.405		2.483	2.483
DISTANCE (m)			54.30		
PIPE SLOPE			1:47		
PIPE SIZE			225mm		

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DBFL				
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DBFL Consulting Engineers				

PROJECT

FORTUNESTOWN LANE & GARTERS LANE RESIDENTIAL DEVELOPMENT

DRG. TITLE

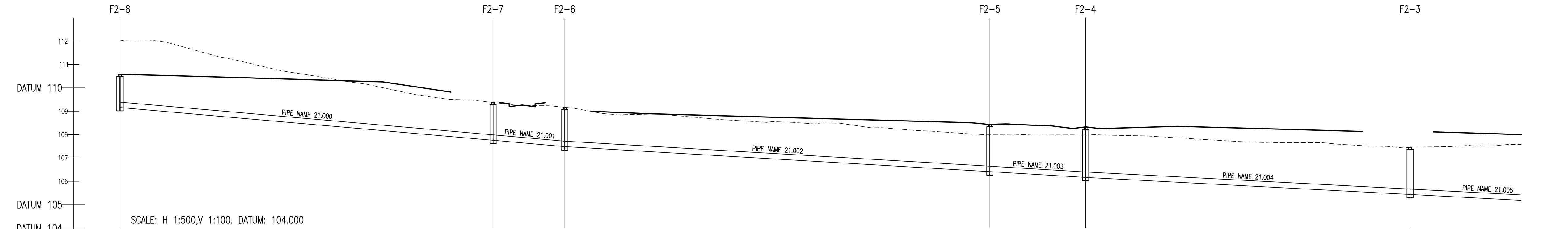
FOUL WATER LONG SECTIONS SHEET 5 OF 6

CLIENT

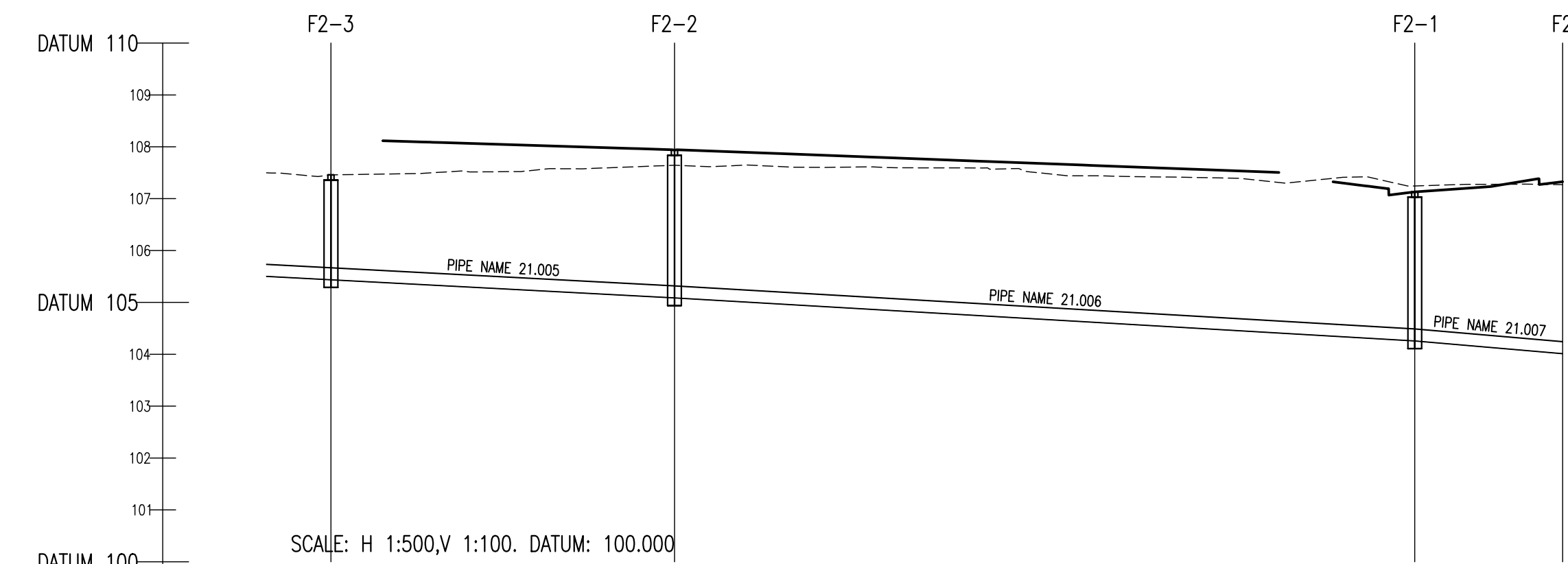
GREENACRE RESIDENTIAL DAC

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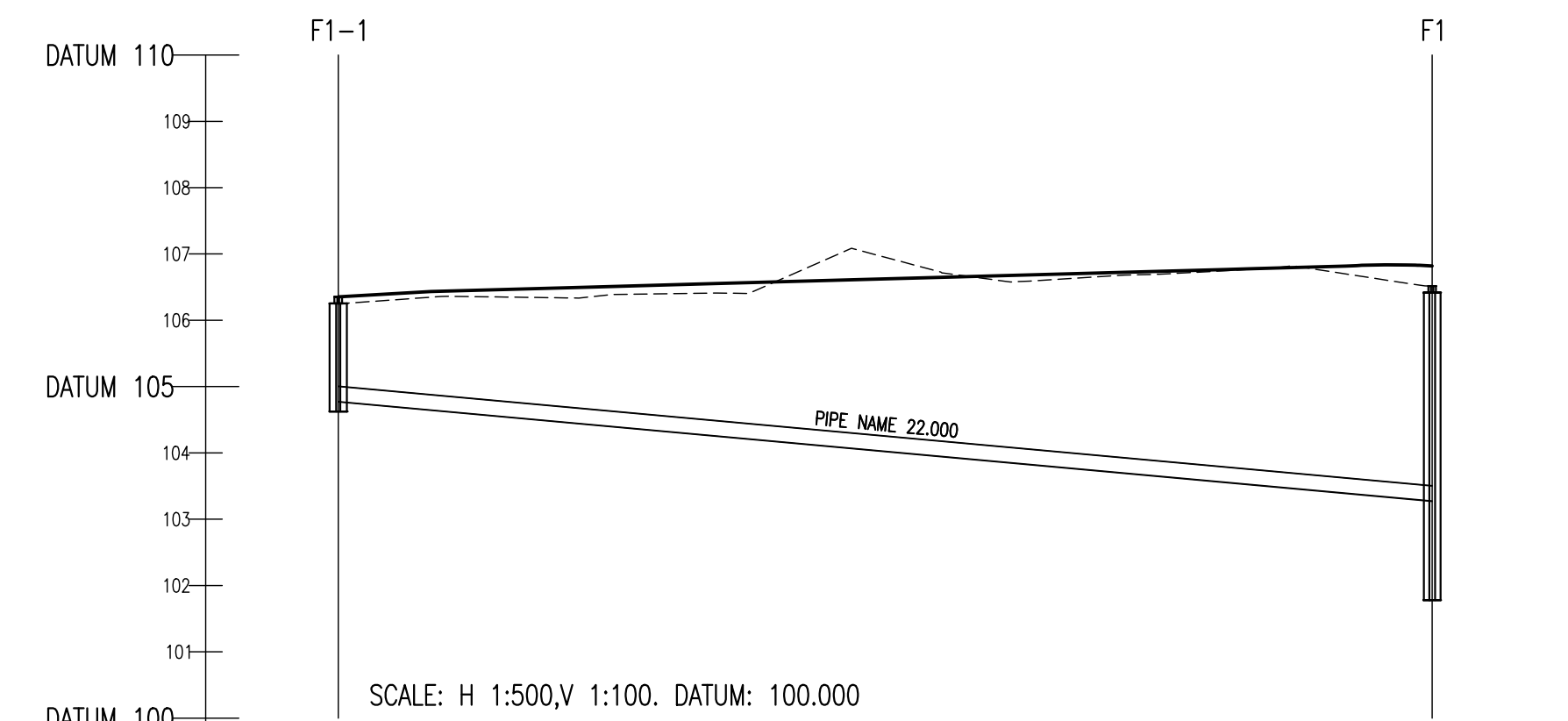
WHEN SECTIONS ARE VIEWED AT A3 SIZE
HORIZONTAL SCALE IS 1:1000 AND VERTICAL SCALE IS 1:200



COVER LEVEL		110.580																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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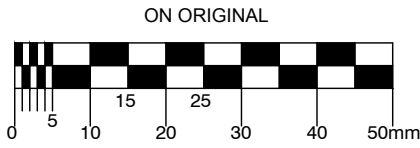


COVER LEVEL												
INVERT LEVEL		106.170	105.439 105.439	107.459		105.090 105.090	107.837		104.280 104.280	107.131		104.014
DEPTH (m)			2.020		2.847				2.871			
DISTANCE (m)		69.45		33.11		71.35			14.25			
PIPE SLOPE		1:95		1:95		1:86			1:58			
PIPE SIZE		225mm		225mm		225mm			225mm			



COVER LEVEL		106.354										106.516
INVERT LEVEL			104.775								103.275	
DEPTH (m)		1.579									4.586	
DISTANCE (m)			82.50									
PIPE SLOPE			1:55									
PIPE SIZE			225mm									

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KEY

----- EXISTING GROUND PROFILE
----- PROPOSED GROUND PROFILE

A	19/12/17	FINAL SUBMISSION, AN BORD PLEANALA	PPK	DMW
REV.	DATE	DESCRIPTION	BY	CHKD.
PLANNING				
DESIGNED	DG	PREPARED	PPK	
DATE	JULY 2017	CHECKED	DMW	
DBFL Consulting Engineers				
DBFL				
DUBLIN OFFICE: Ormond House, Upper Ormond Quay, Dublin 7, Ireland. PHONE +353 1 400 4000 FAX +353 1 400 4050				
WATERFORD OFFICE: Unit 2, The Chandlery, 1-2 O'Connell Street, Waterford, Ireland. PHONE +353 51 309 5500 FAX +353 51 844 913				
DBFL Consulting Engineers				

PROJECT

FORTUNESTOWN LANE & GARTERS LANE RESIDENTIAL DEVELOPMENT

DRG. TITLE

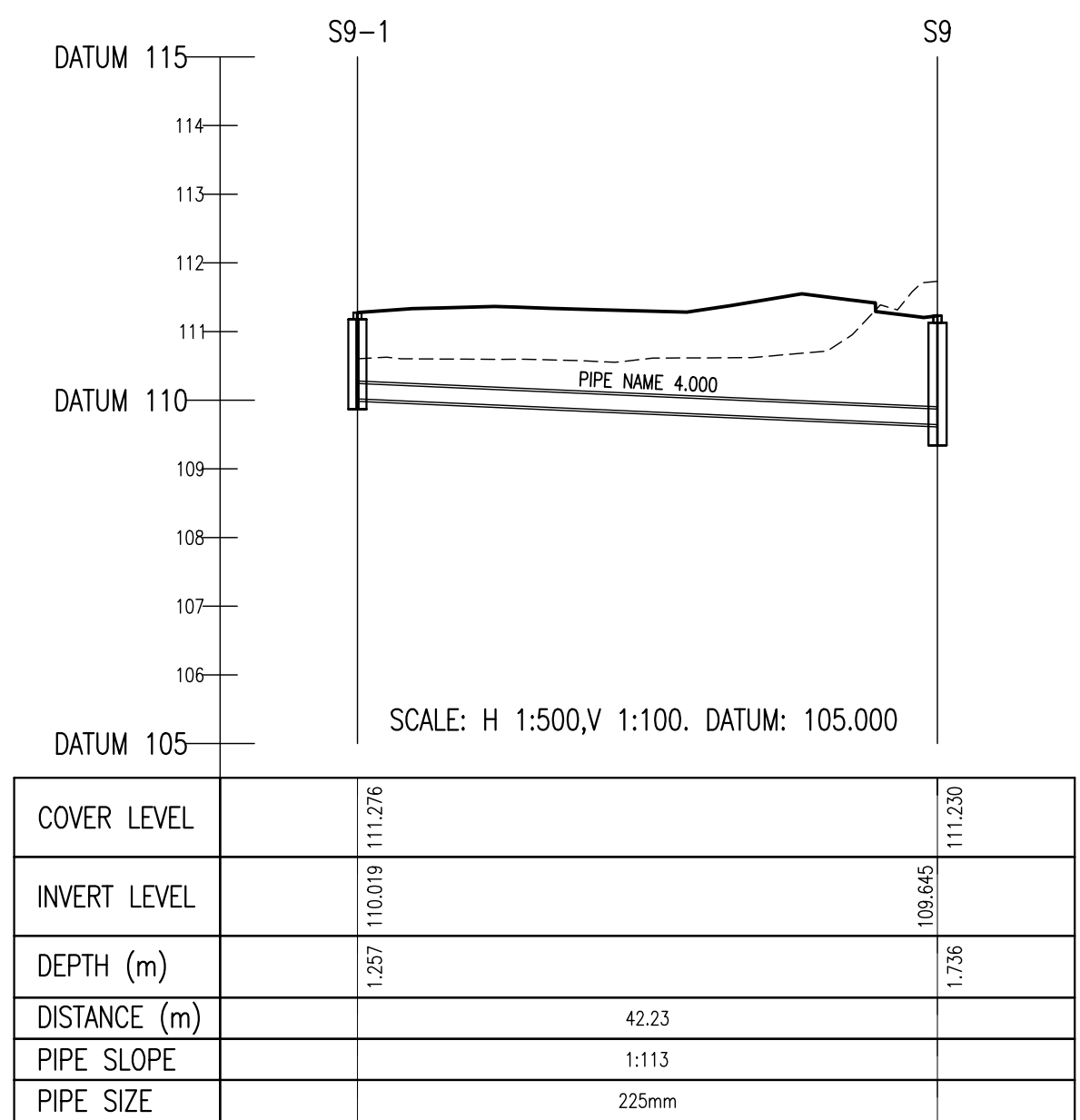
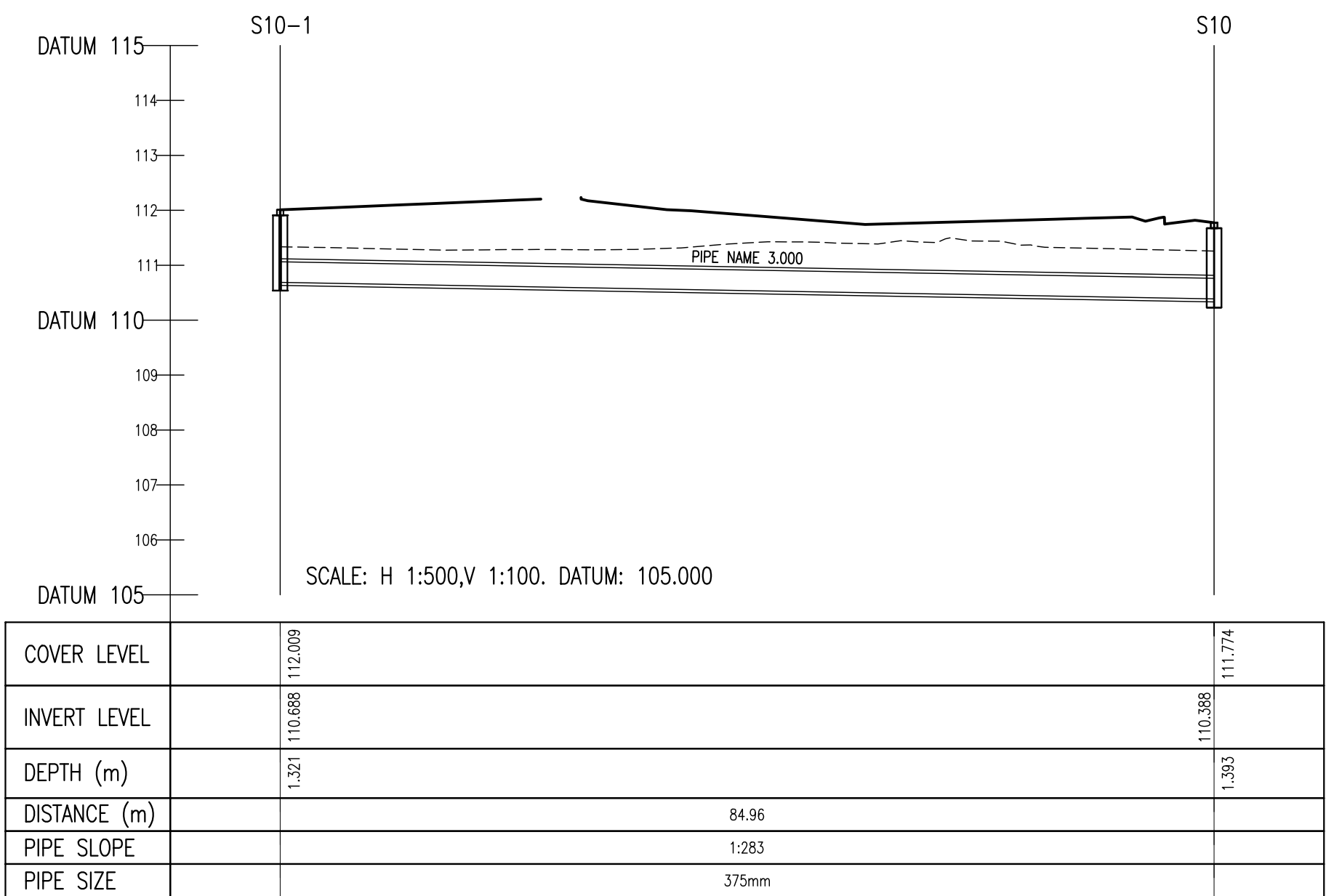
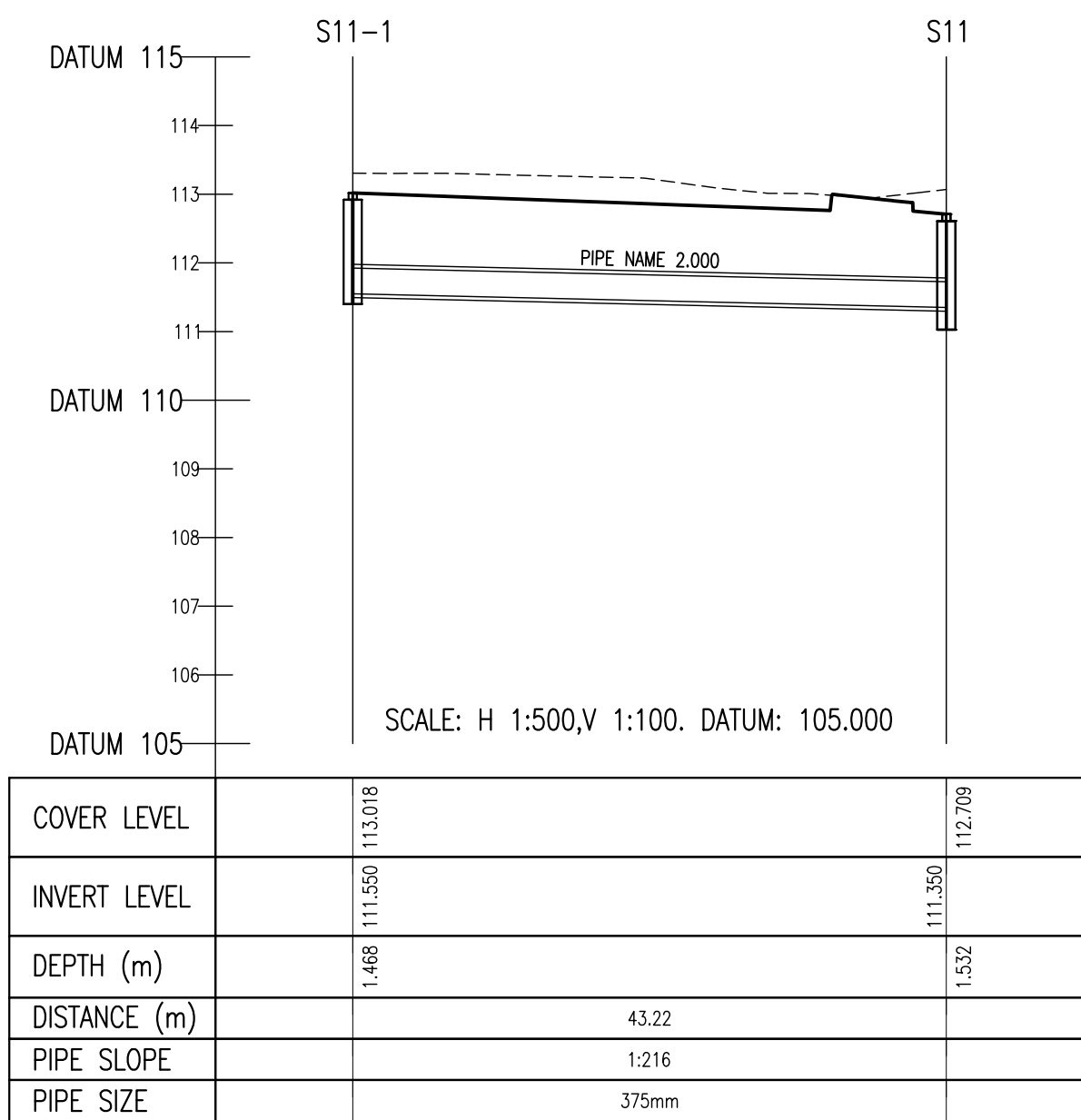
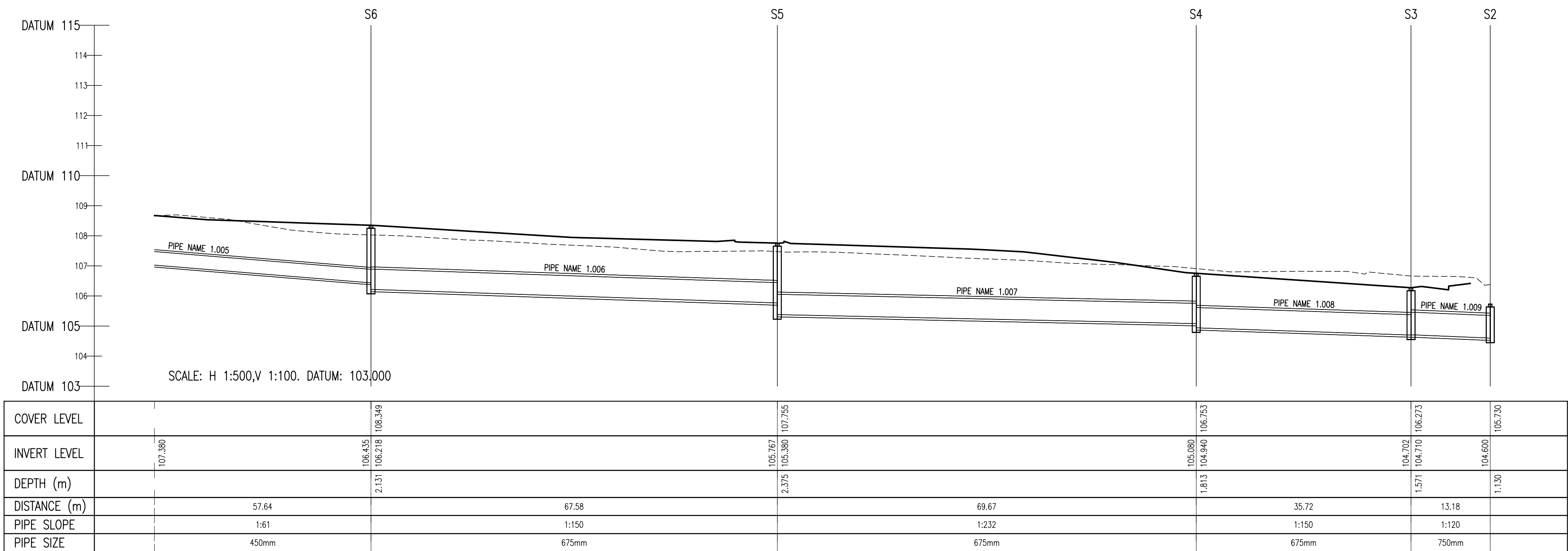
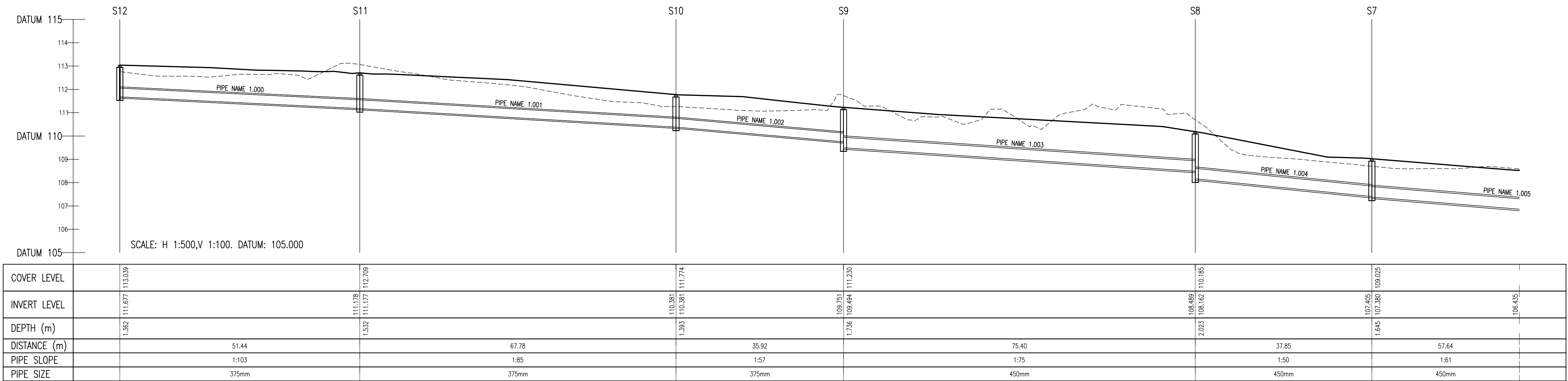
FOUL WATER LONG SECTIONS SHEET 6 OF 6

CLIENT

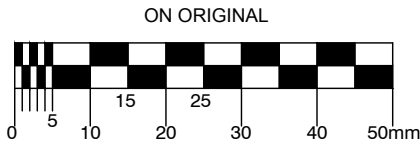
GREENACRE RESIDENTIAL DAC

SCALE	AS SHOWN @A1	FILE REF.	162073-3071
DRG. NO.	162073-3076		A

WHEN SECTIONS ARE VIEWED AT A3 SIZE
HORIZONTAL SCALE IS 1:1000 AND VERTICAL SCALE IS 1:200



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KEY

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----- PROPOSED GROUND PROFILE

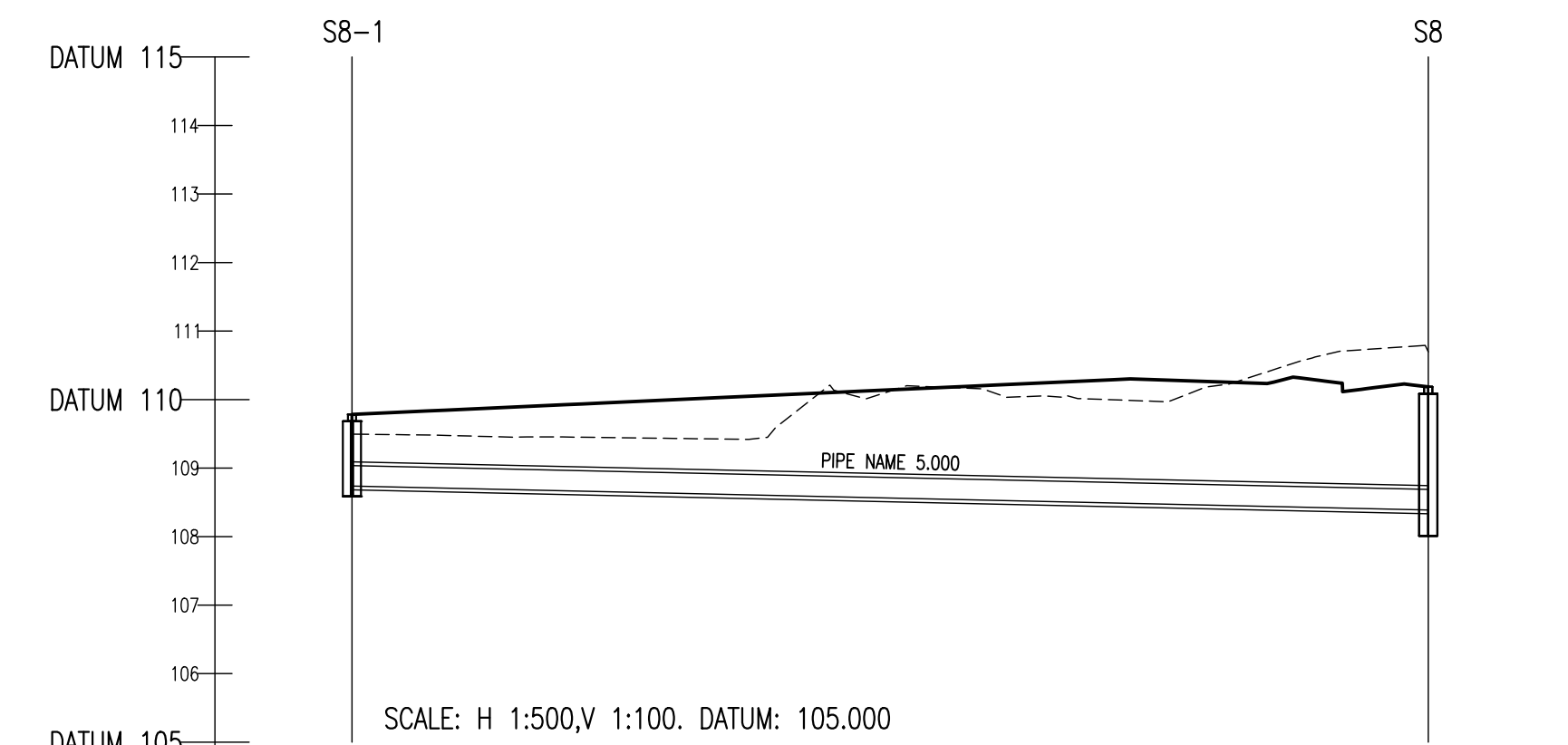
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REV.	DATE	DESCRIPTION	BY	CHKD.
PLANNING				
DESIGNED	DG	PREPARED	PPK	
DATE	JULY 2017	CHECKED	DMW	
 DBFL Consulting Engineers DUBLIN OFFICE: Ormond House, Upper Ormond Quay, Dublin 7, Ireland. PHONE +353 1 400 4000 FAX +353 1 400 4050 WATERFORD OFFICE: Unit 2, The Chandlery, 1-2 O'Connell Street, Waterford, Ireland. PHONE +353 51 309 550 FAX +353 51 844 913 EMAIL: info@dbfl.ie SITE: www.dbfl.ie				

PROJECT
FORTUNESTOWN LANE & GARTERS LANE RESIDENTIAL DEVELOPMENT

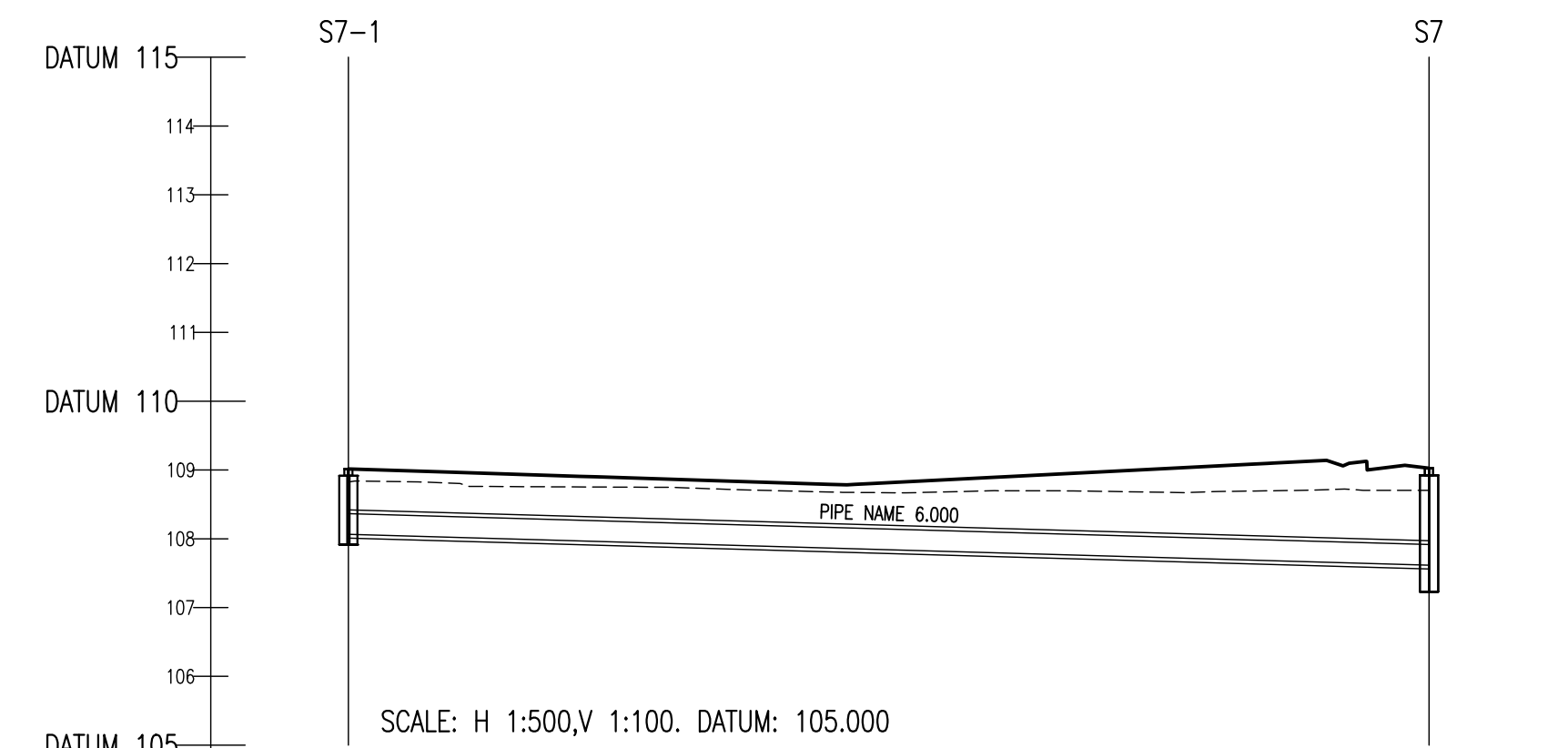
DRG. TITLE
SURFACE WATER
LONG SECTION
SHEET 1 OF 7

CLIENT
GREENACRE RESIDENTIAL DAC

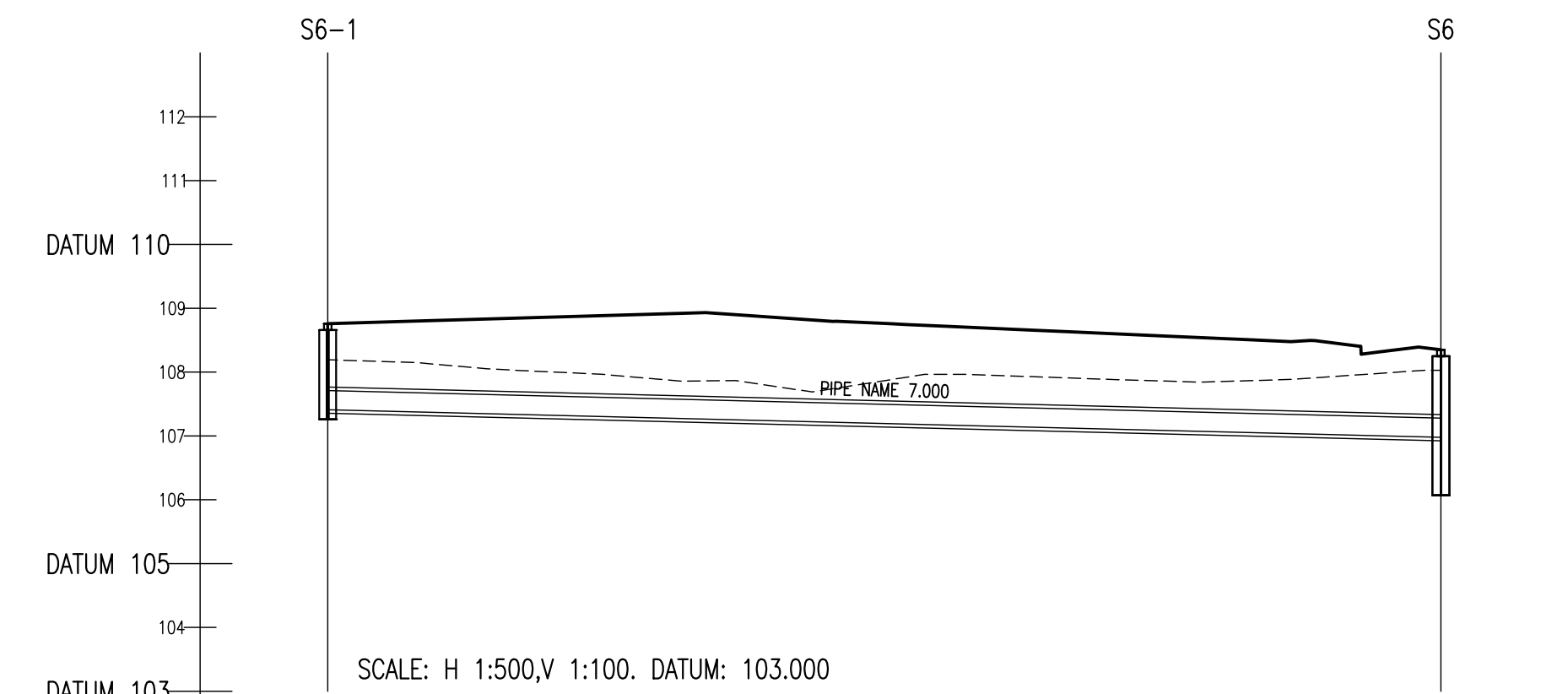
SCALE	AS SHOWN @A1	FILE REF.	162073-3081
DRG. NO.	162073-3081		A



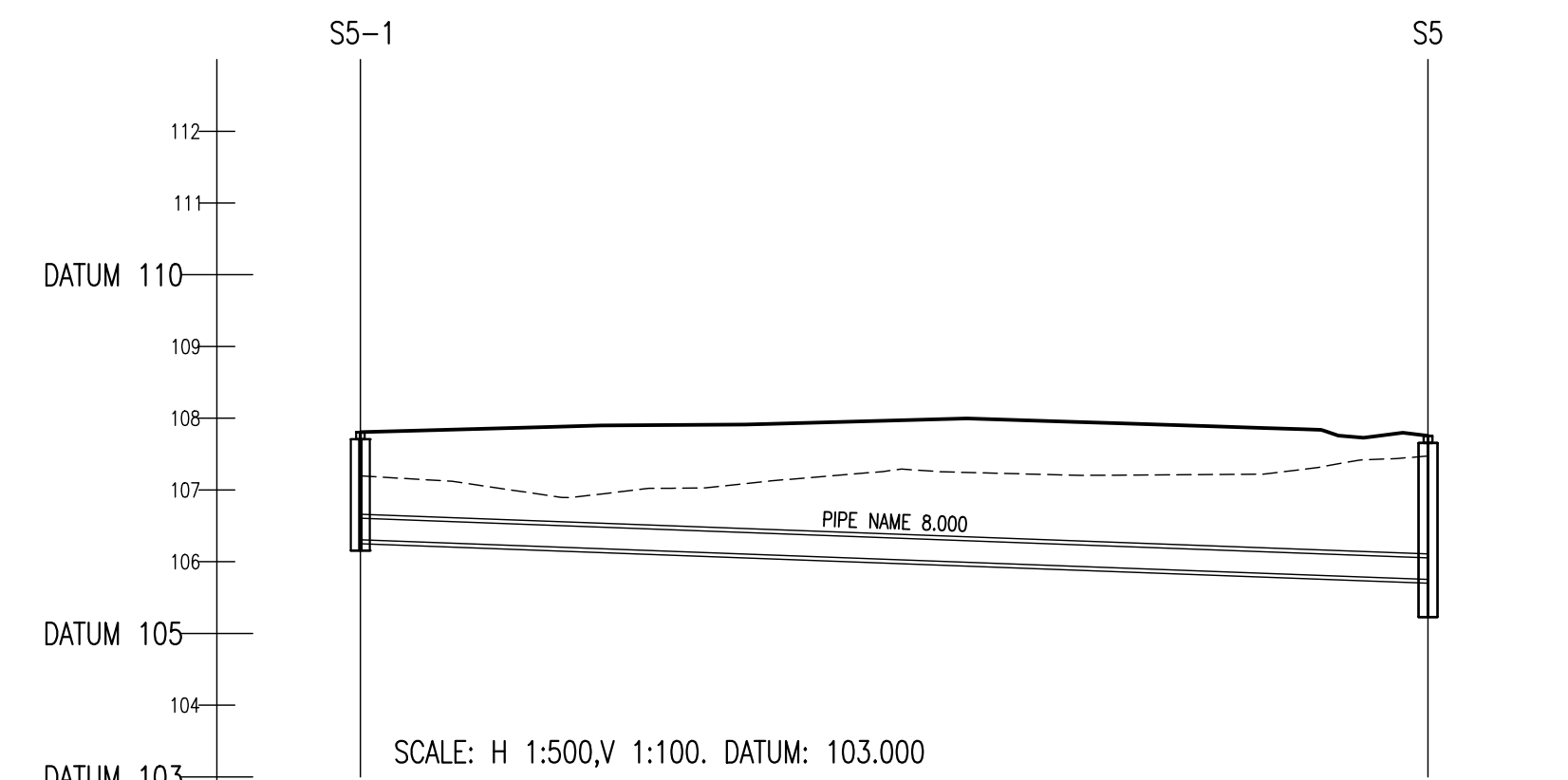
COVER LEVEL		109.784	110.185
INVERT LEVEL		108.737	108.388
DEPTH (m)		1.047	2.023
DISTANCE (m)		78.54	
PIPE SLOPE		1:225	
PIPE SIZE		300mm	



COVER LEVEL		109.016	109.025
INVERT LEVEL		108.065	107.617
DEPTH (m)		0.951	1.645
DISTANCE (m)		78.54	
PIPE SLOPE		1:175	
PIPE SIZE		300mm	

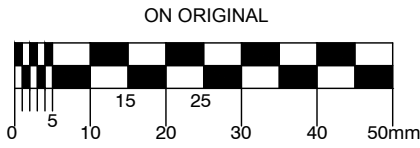


COVER LEVEL		108.739	108.349
INVERT LEVEL		107.410	106.978
DEPTH (m)		1.349	2.131
DISTANCE (m)		87.24	
PIPE SLOPE		1:202	
PIPE SIZE		300mm	



COVER LEVEL		107.886	107.755
INVERT LEVEL		106.305	106.754
DEPTH (m)		1.501	2.275
DISTANCE (m)		74.40	
PIPE SLOPE		1:135	
PIPE SIZE		300mm	

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KEY

- EXISTING GROUND PROFILE
———— PROPOSED GROUND PROFILE

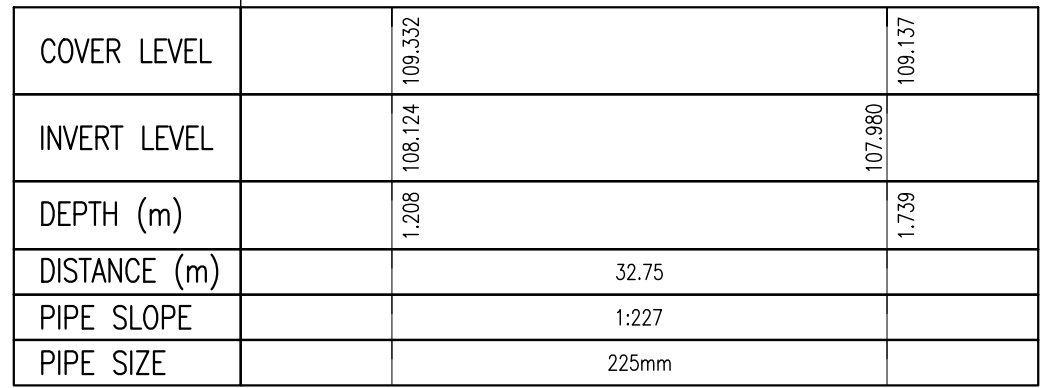
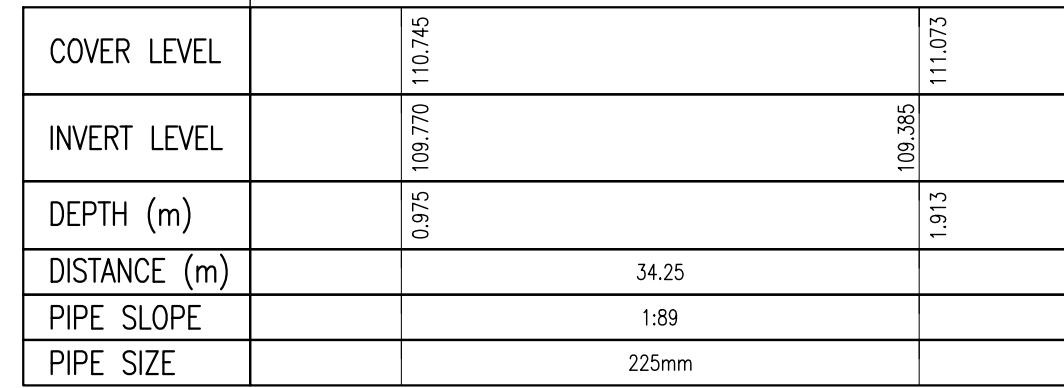
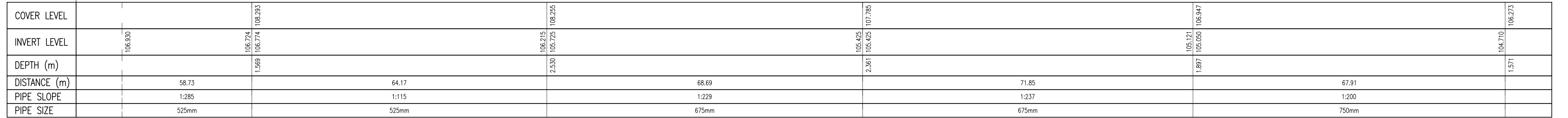
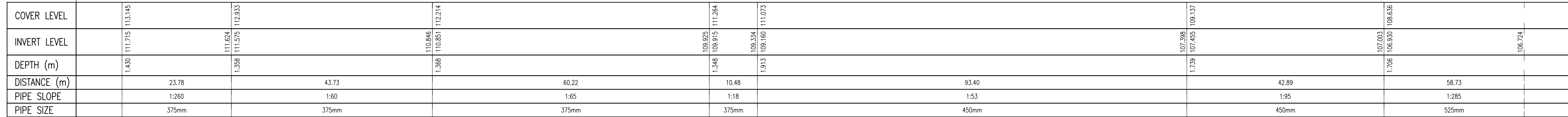
A	19/12/17	FINAL SUBMISSION, AN BORD PLEANALA	PPK	DMW
REV.	DATE	DESCRIPTION	BY	CHKD.
PLANNING				
DESIGNED	DG	PREPARED	PPK	
DATE	JULY 2017	CHECKED	DMW	
DBFL DBFL Consulting Engineers info@dbfl.ie www.dbfl.ie 01DUIN OFFICE Ormond House, Upper Ormond Quay, Dublin 7, Ireland. PHONE +353 1 400 4000 FAX +353 1 400 4050 WATERFORD OFFICE Unit 2, The Chandlery, 1-2 O'Connell Street, Waterford, Ireland. PHONE +353 51 309 550 FAX +353 51 844 913				

PROJECT
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DEVELOPMENT

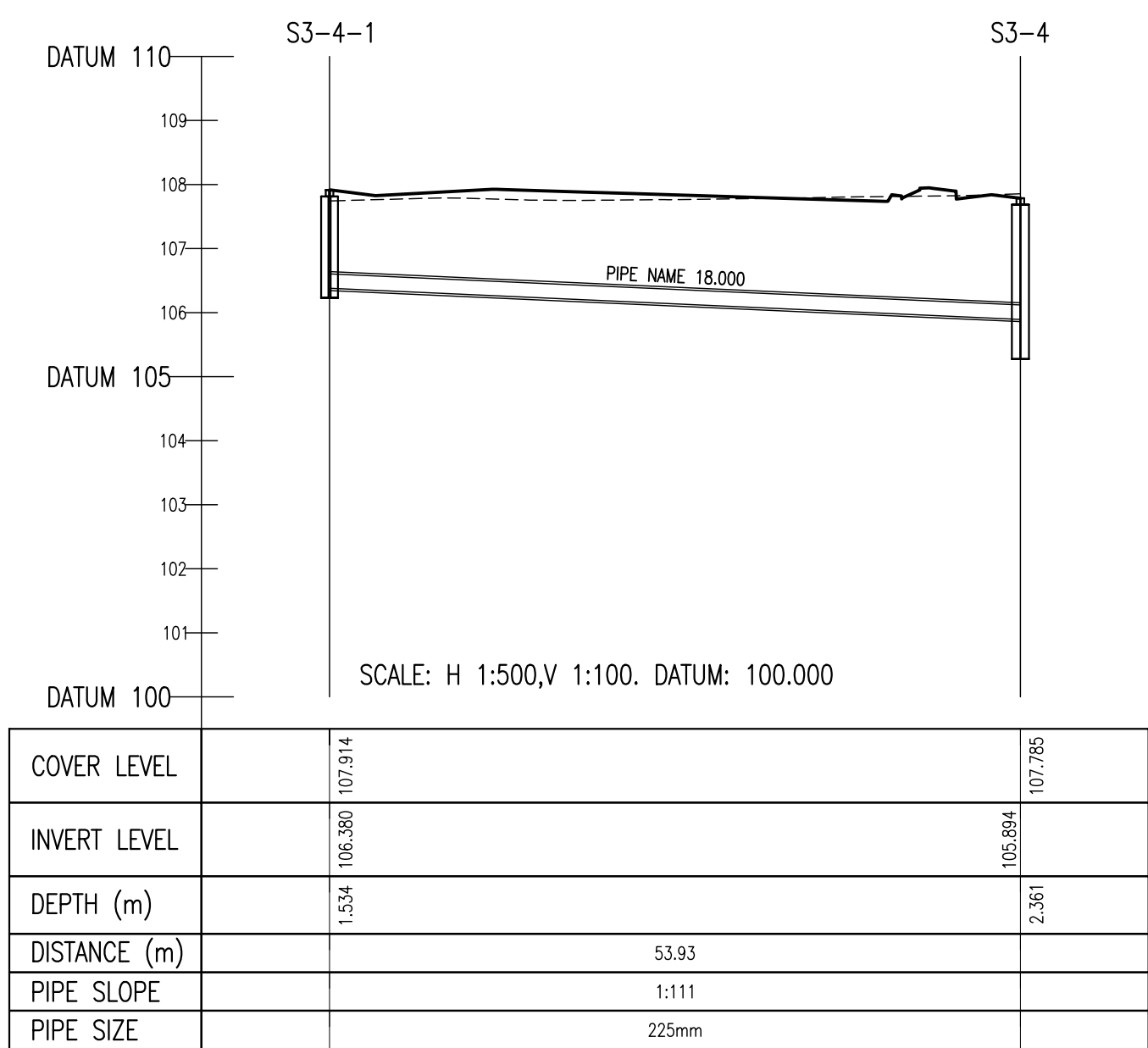
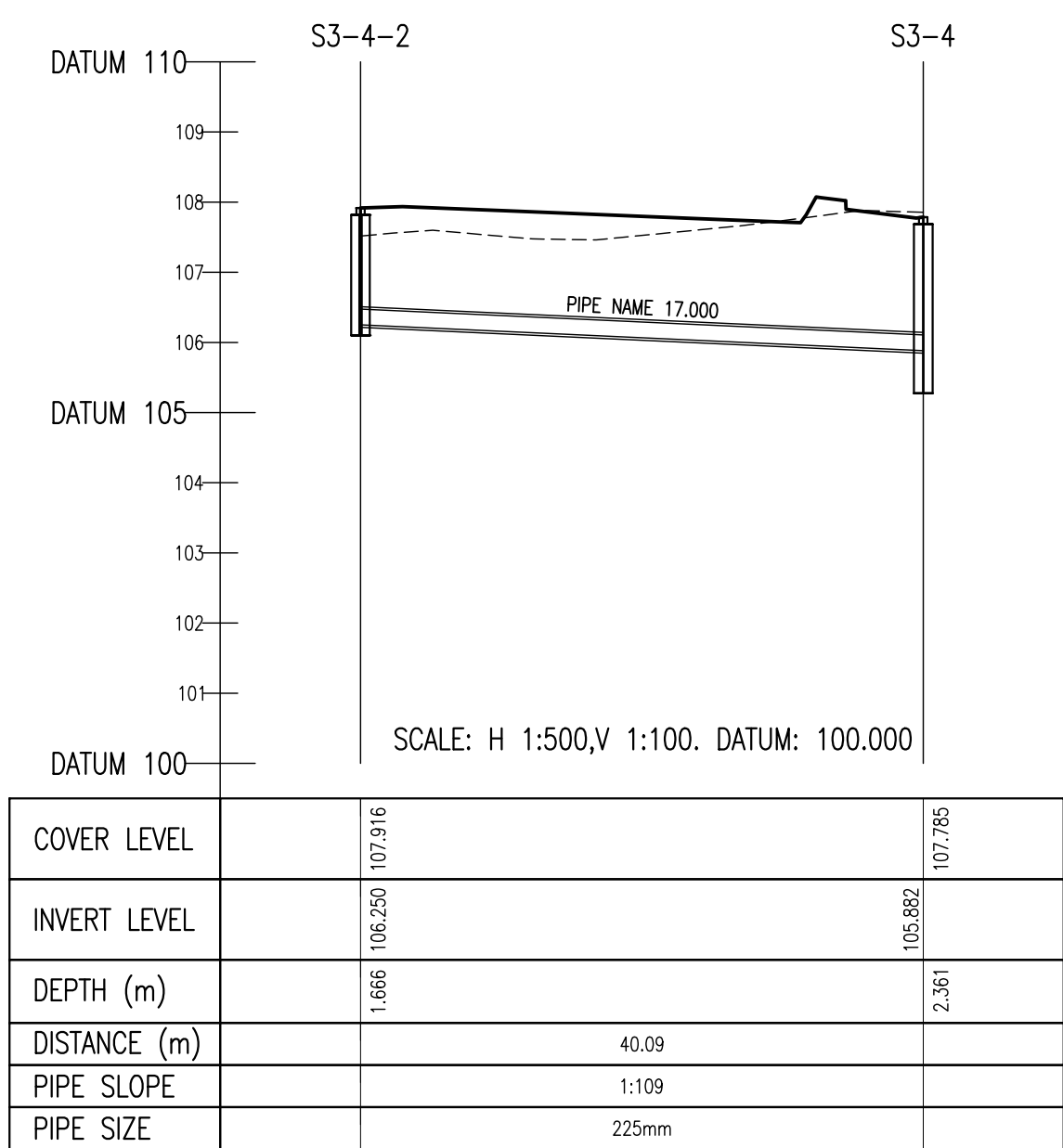
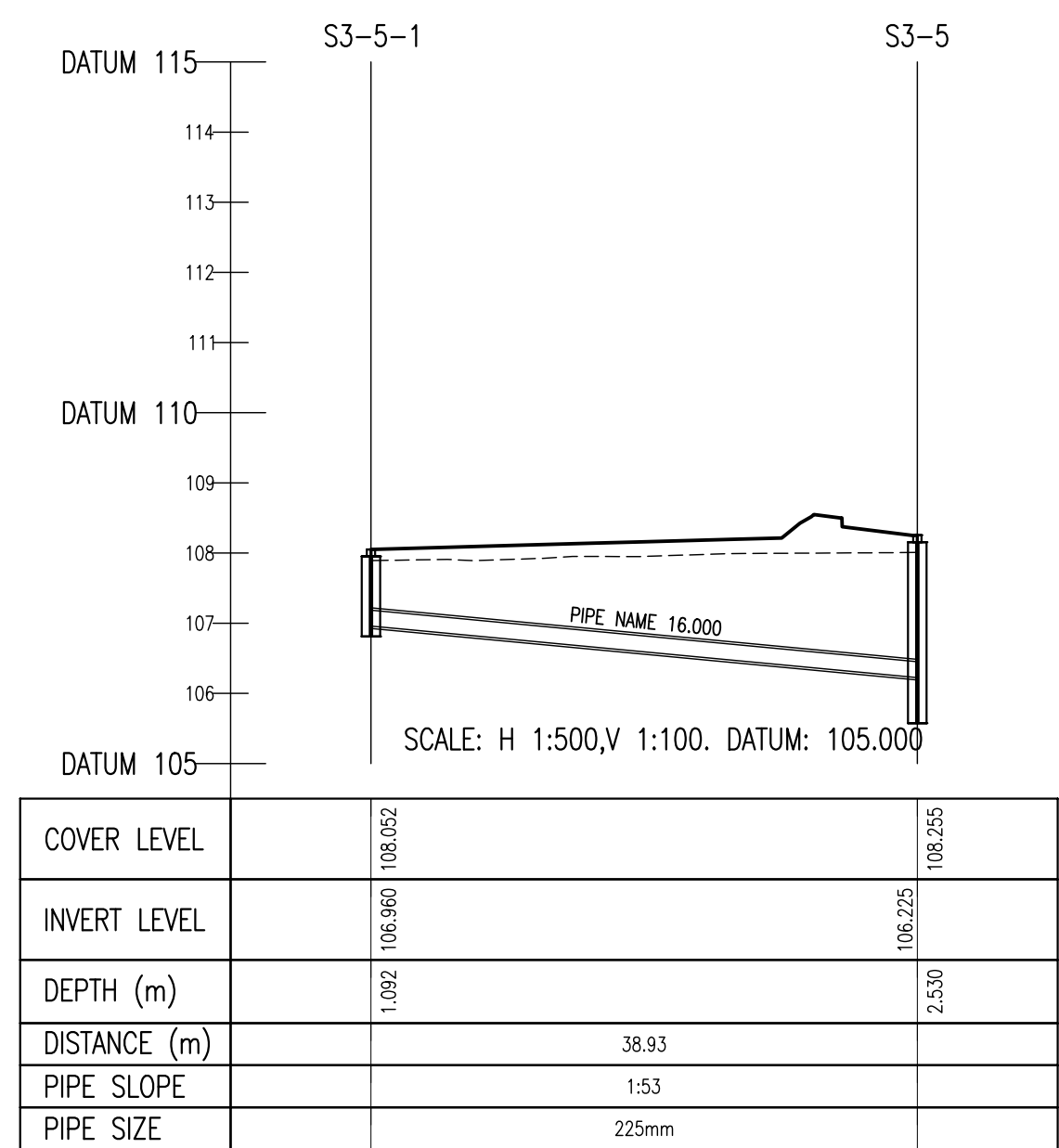
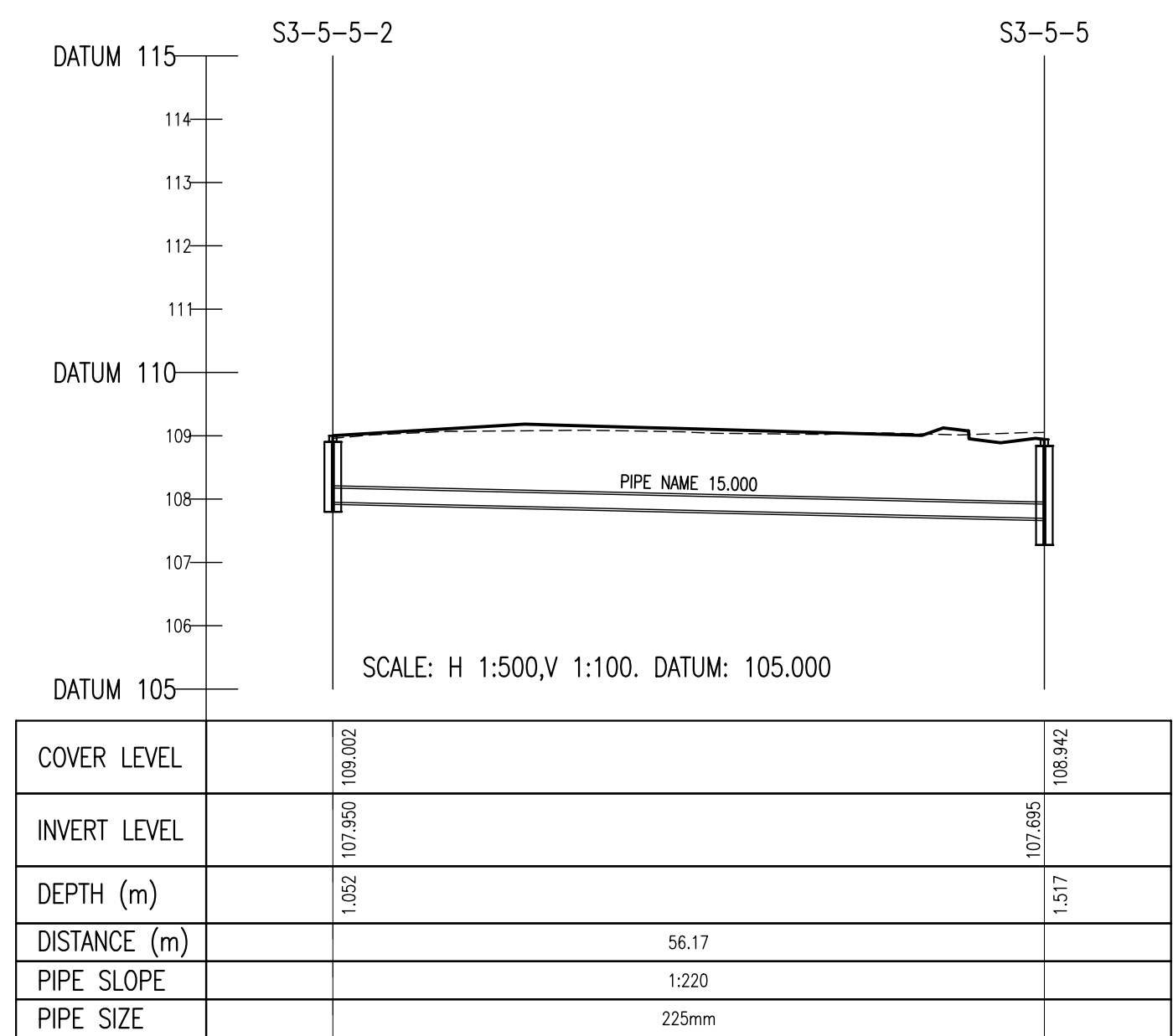
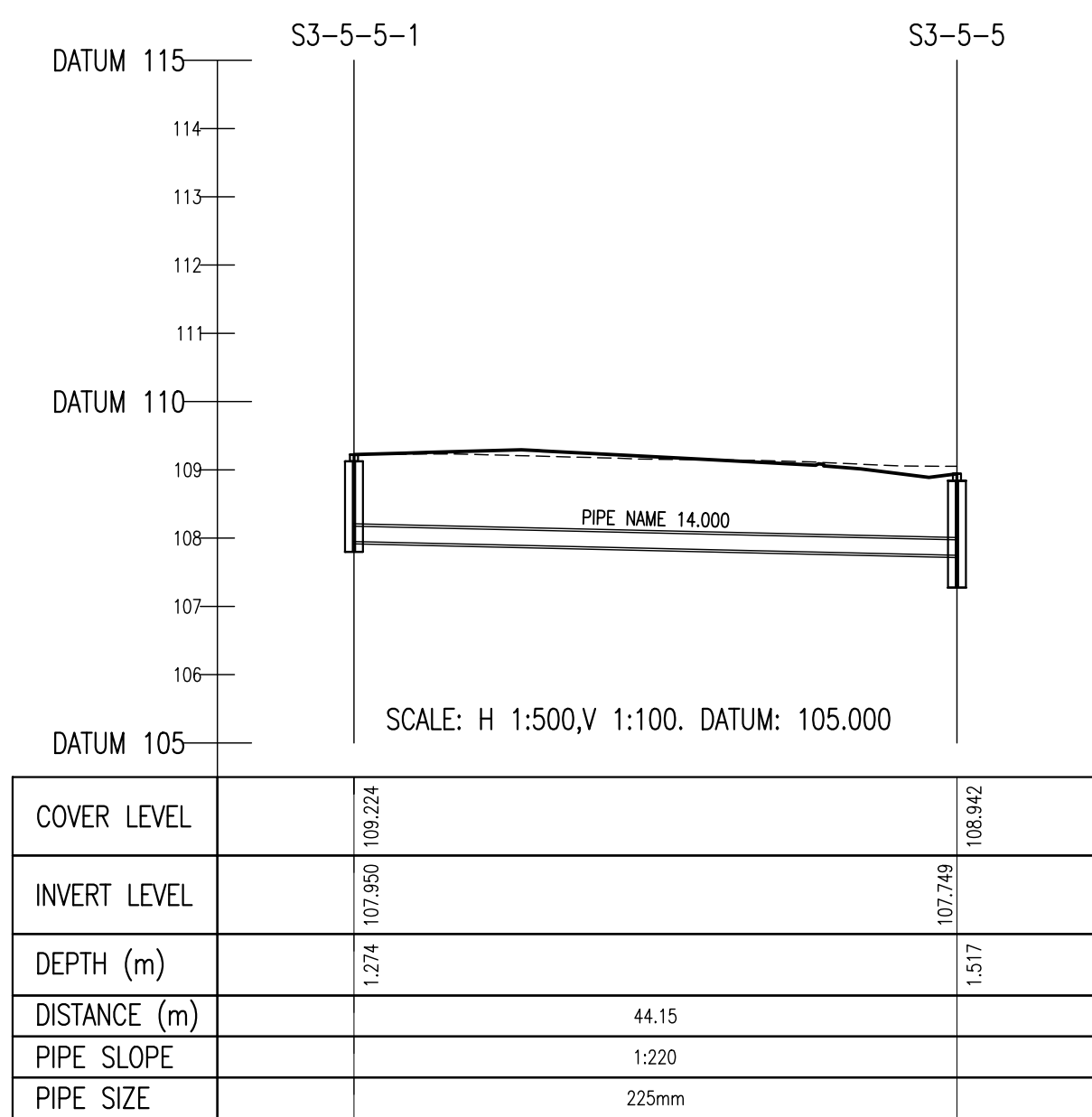
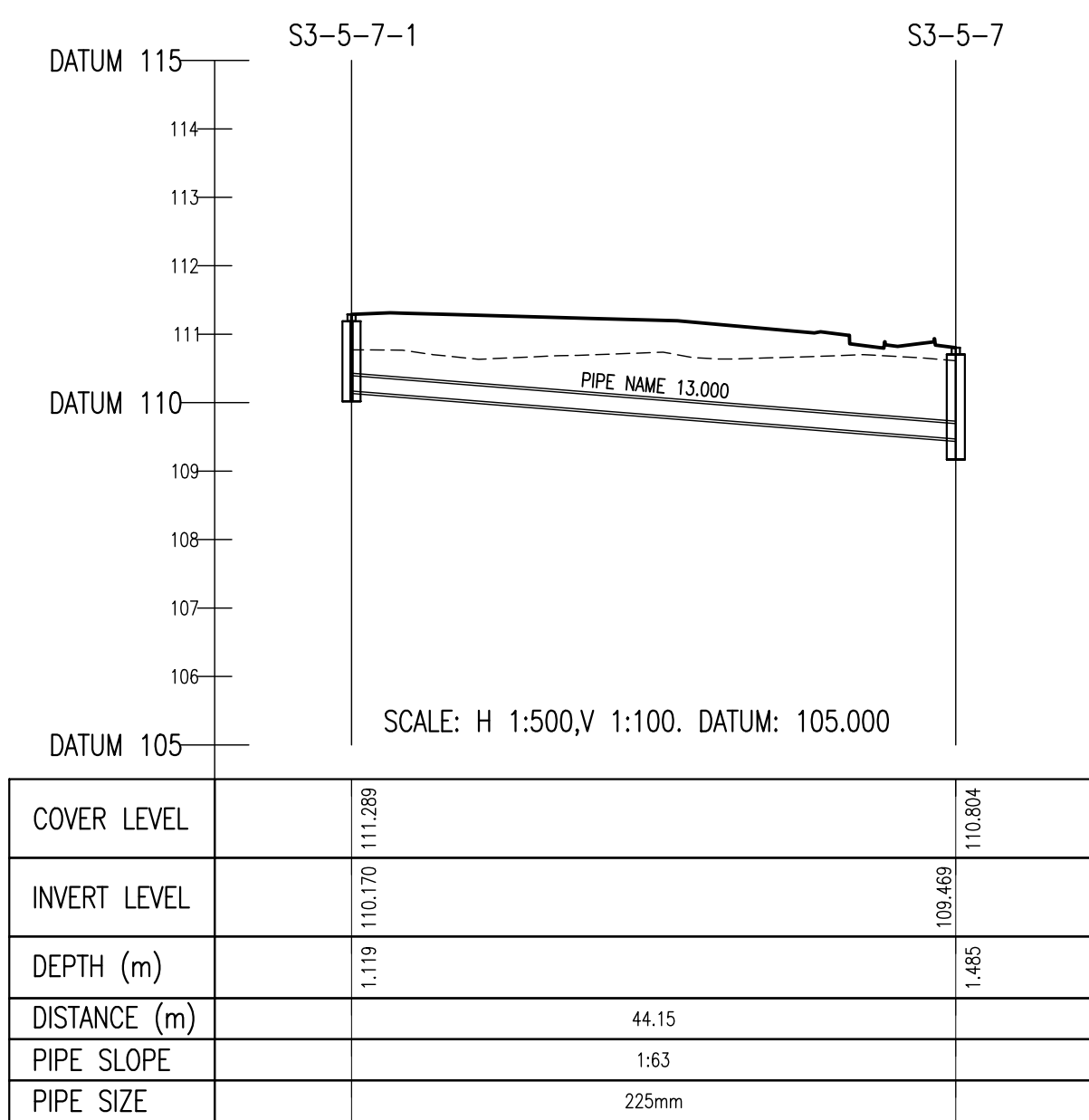
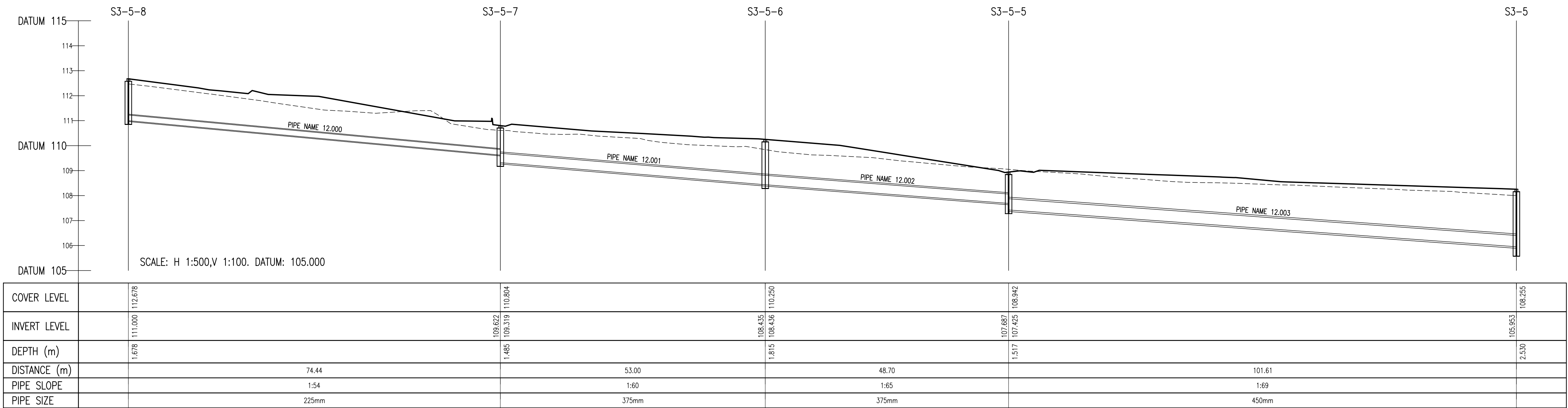
DRG. TITLE
SURFACE WATER
LONG SECTION
SHEET 2 OF 7

CLIENT
GREENACRE RESIDENTIAL DAC

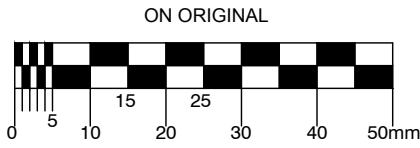
SCALE	AS SHOWN @A1	FILE REF.	162073-3081
DRG. NO.	162073-3082		A



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KEY

--- EXISTING GROUND PROFILE
— PROPOSED GROUND PROFILE

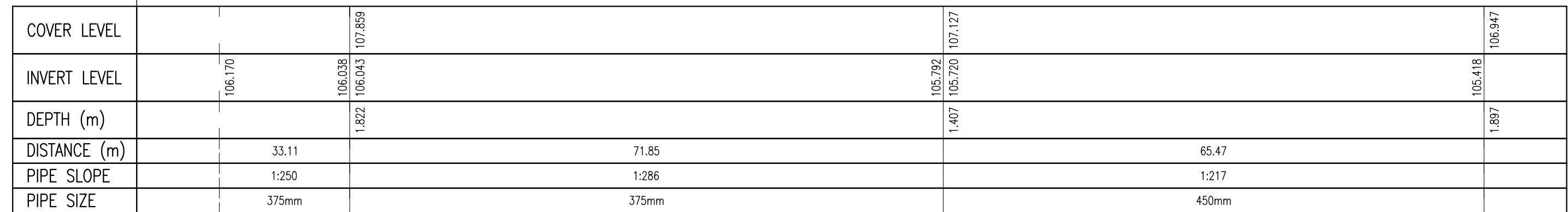
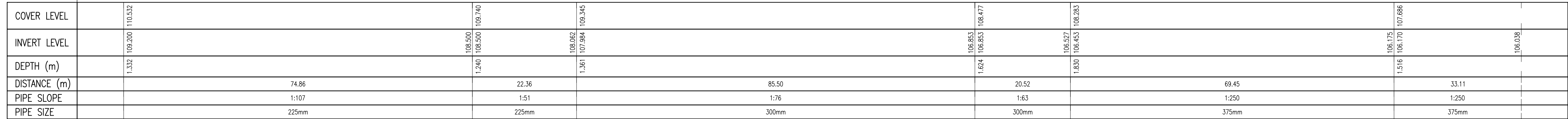
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REV.	DATE	DESCRIPTION	BY	CHKD.
PLANNING				
DESIGNED	DG	PREPARED	PPK	
DATE	JULY 2017	CHECKED	DMW	
 DUBLIN OFFICE Ormond House, Upper Ormond Quay, Dublin 7, Ireland. PHONE +353 1 400 4000 FAX +353 1 400 4050				
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DBFL Consulting Engineers EMAIL info@dbfl.ie SITE www.dbfl.ie				

PROJECT
FORTUNESTOWN LANE &
GARTERS LANE RESIDENTIAL
DEVELOPMENT

DRG. TITLE
SURFACE WATER
LONG SECTION
SHEET 4 OF 7

CLIENT
GREENACRE RESIDENTIAL DAC

SCALE	AS SHOWN @A1	FILE REF.	162073-3081
DRG. NO.	162073-3084		A



NOTES:

1. ALL DRAWINGS TO BE CHECKED BY CONTRACTOR ON SITE AND ENGINEER INFORMED OF DISCREPANCIES BEFORE WORK COMMENCES
2. ALL LEVELS ARE IN METRES AND ARE RELATED TO A LOCAL DATUM
3. CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF PAYEMENT LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORKS ON SITE
4. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL PLANNING AUTHORITY AND IRISH WATER
5. MANHOLE COVER LEVELS ARE TO CONFORM WITH FINISHED ROAD AND PATH LEVELS
6. WHERE COVER TO PIPE IS LESS THAN 1200mm (ROAD/PATH/VERGE) OR 900mm (OPEN SPACE) SURROUND PIPE IN MINIMUM 150mm CONCRETE
7. FOUL SEWER DESIGNED IN ACCORDANCE WITH IRISH WATER SPECIFICATION

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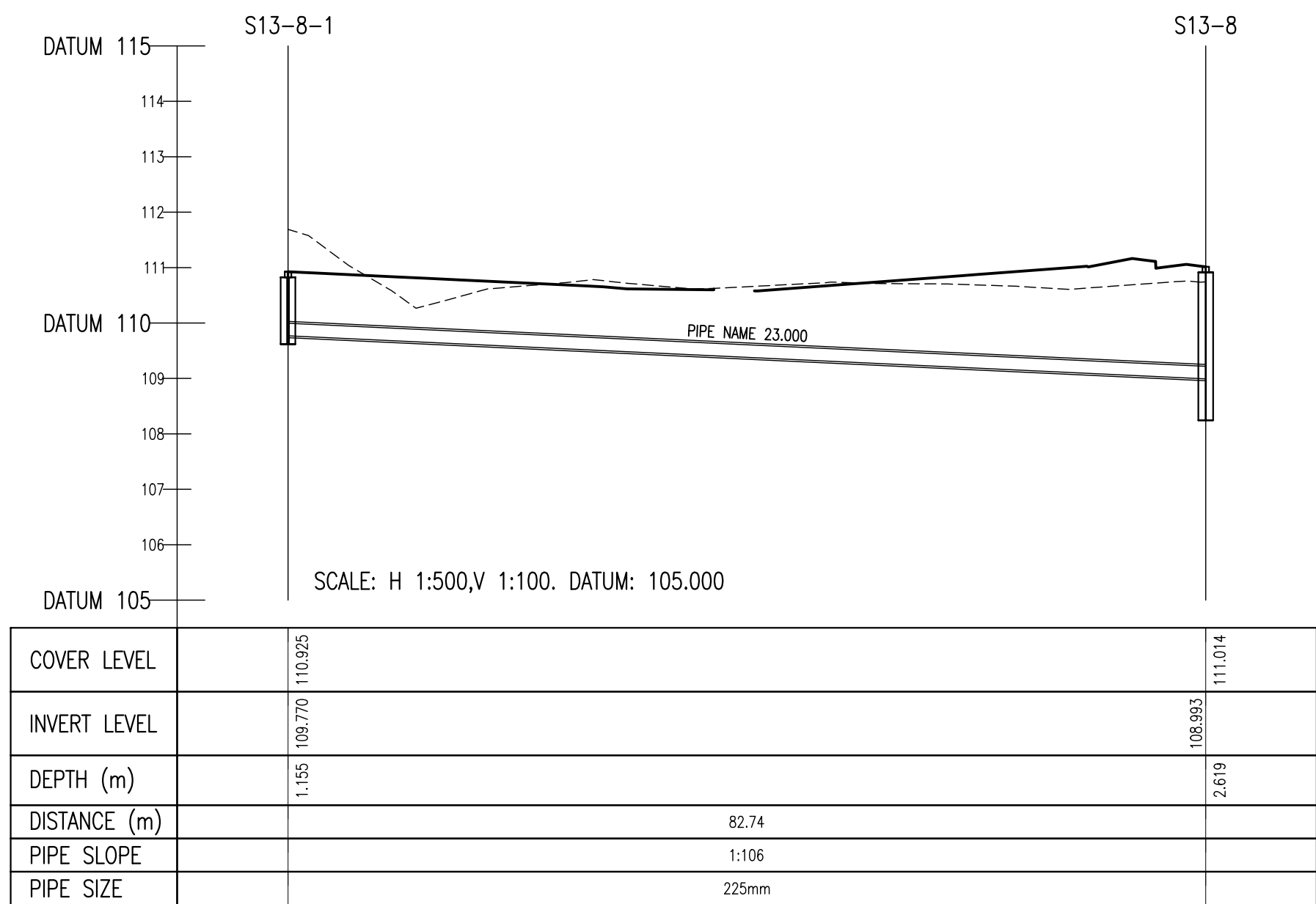
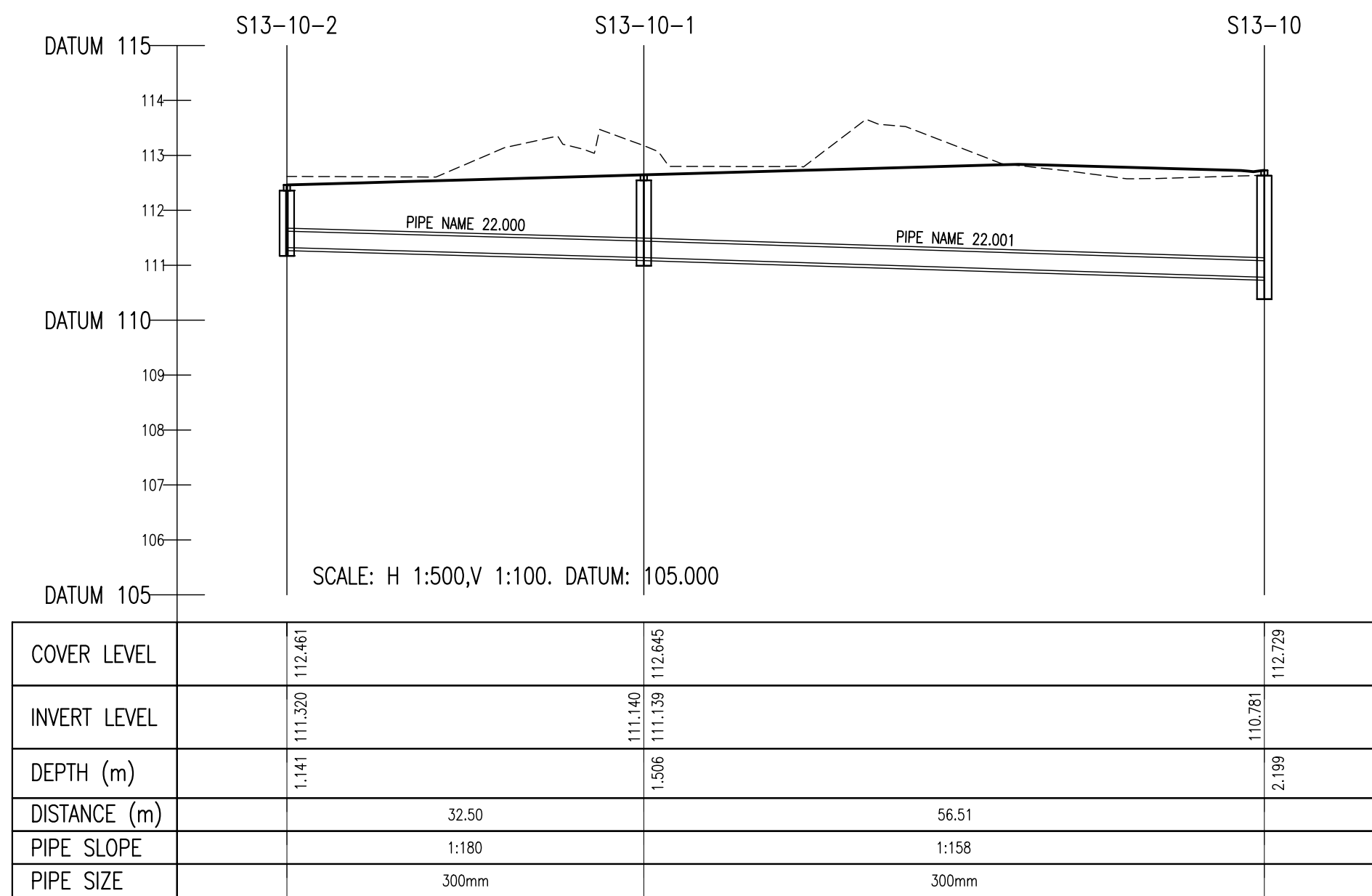
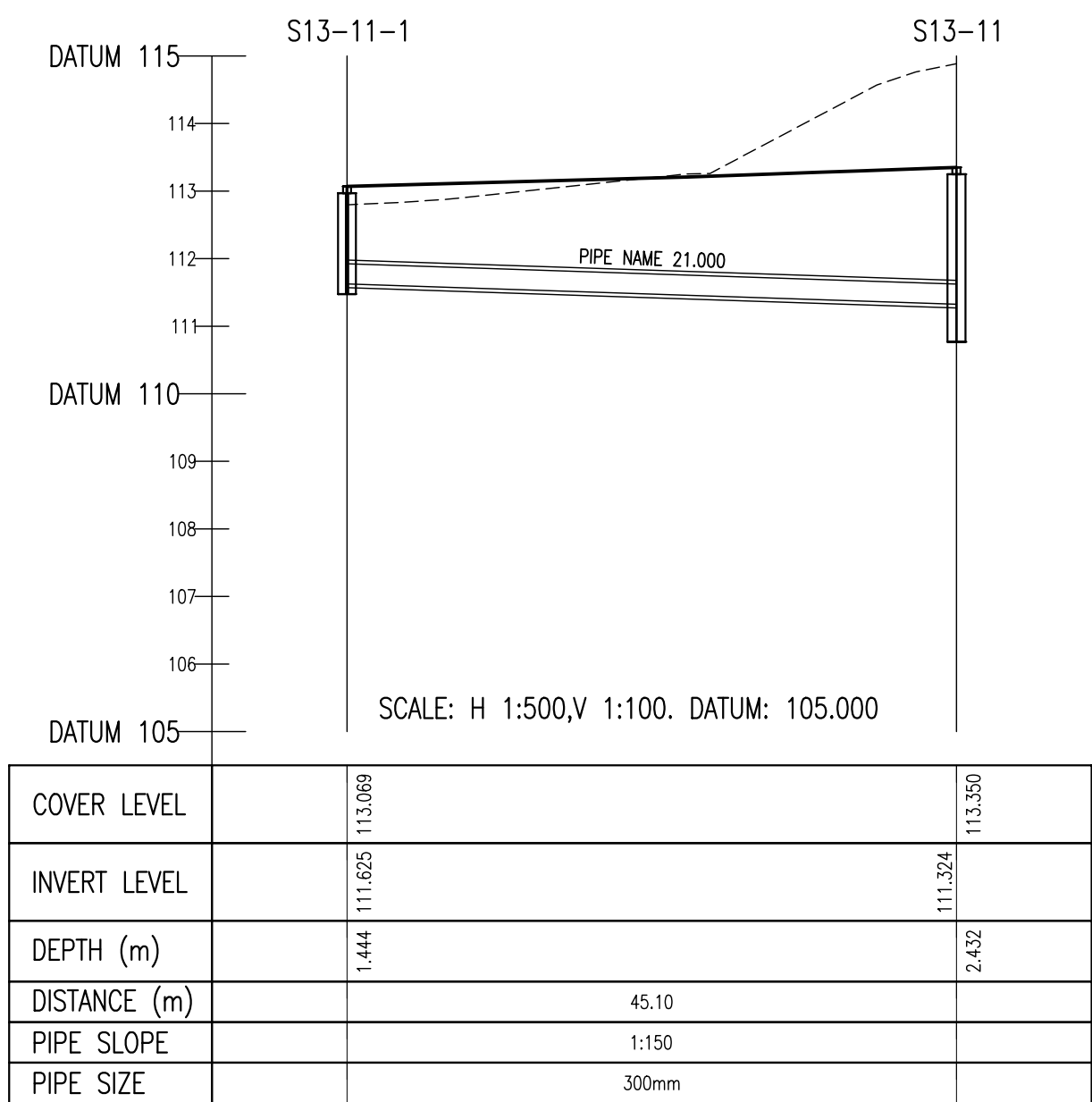
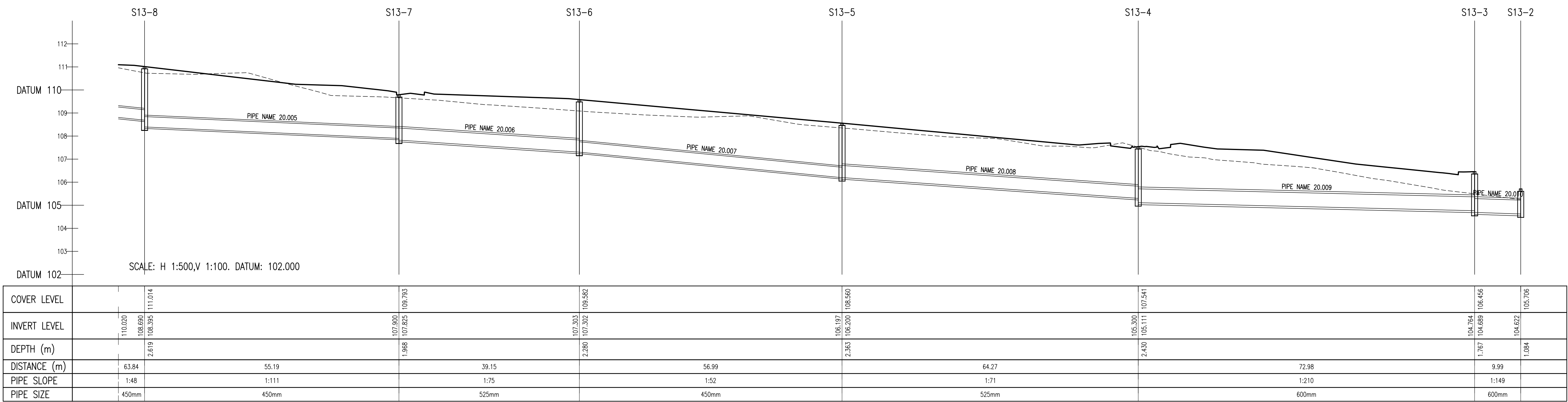
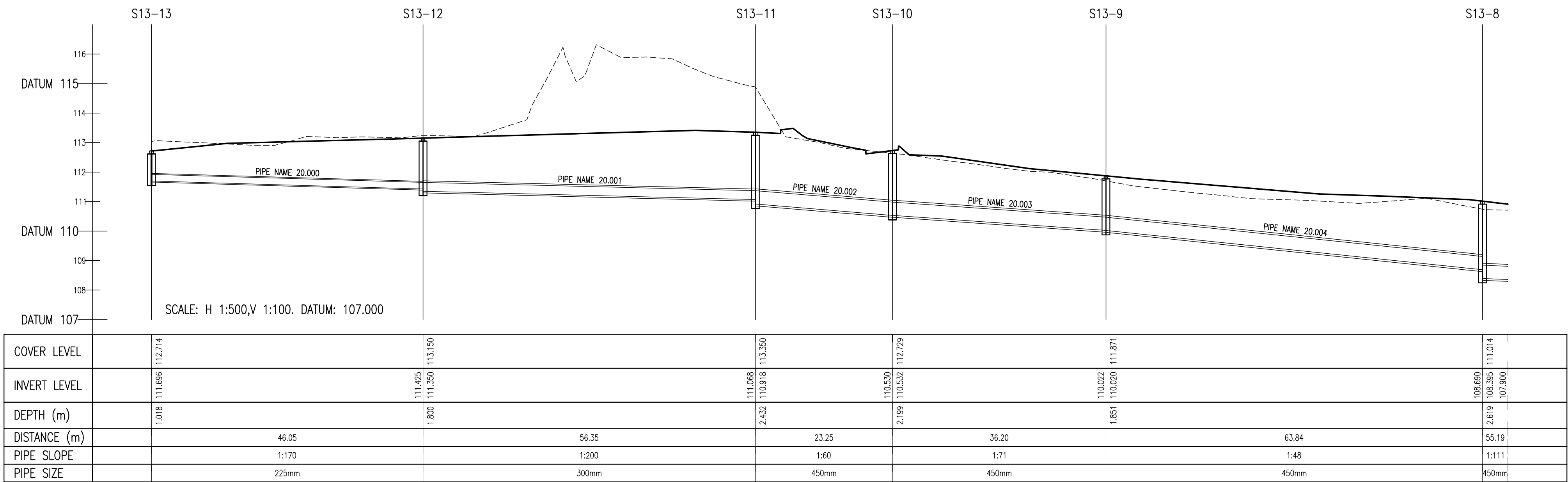
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ORG. TITLE
SURFACE WATER
LONG SECTION
SHEET 5 OF 7

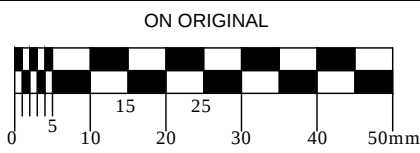
SCALE	AS SHOWN @A1	FILE REF.	162073-3081
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ARG. NO.	162073-3085
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WHEN SECTIONS ARE VIEWED AT A3 SIZE
HORIZONTAL SCALE IS 1:1000 AND VERTICAL SCALE IS 1:200

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KEY

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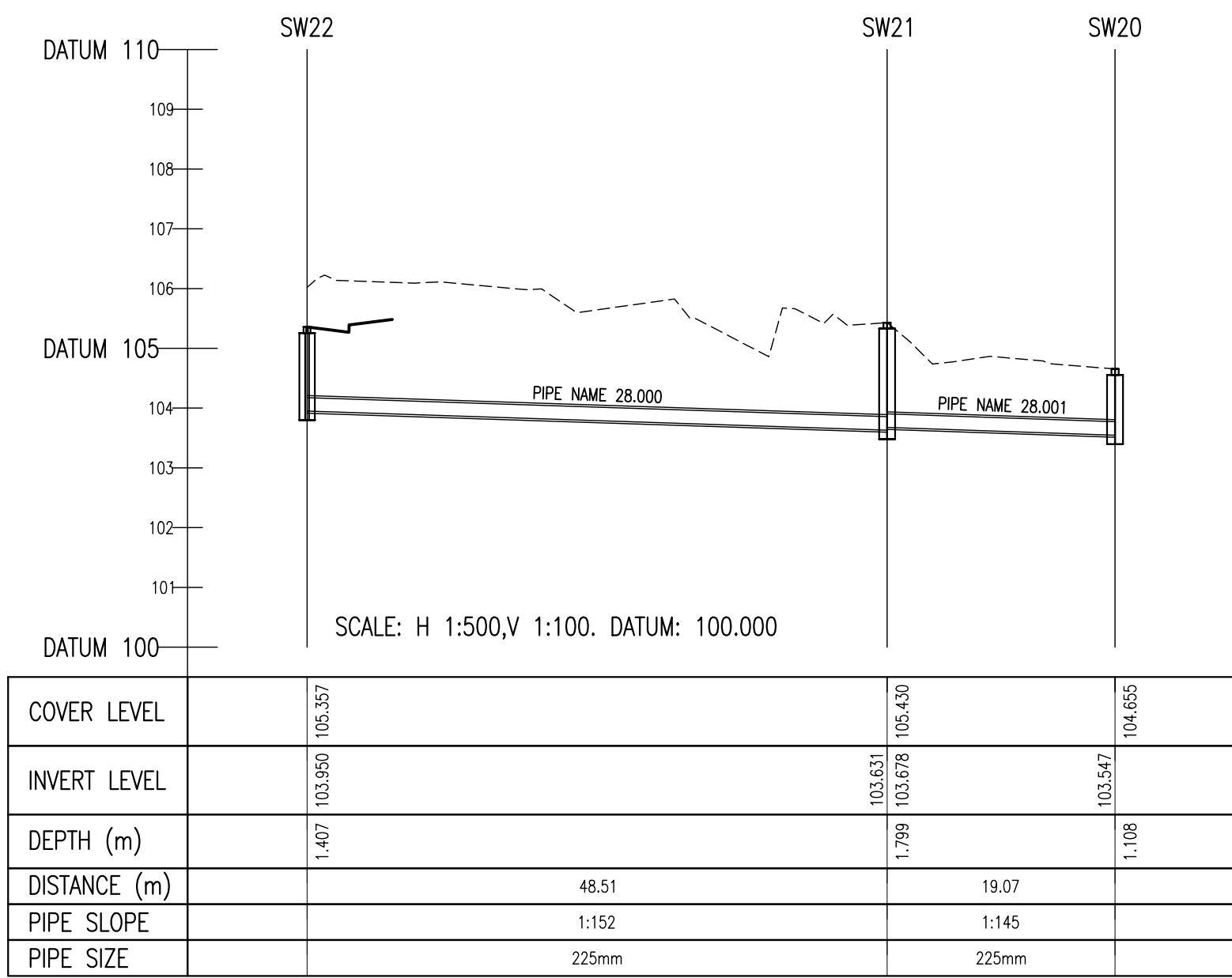
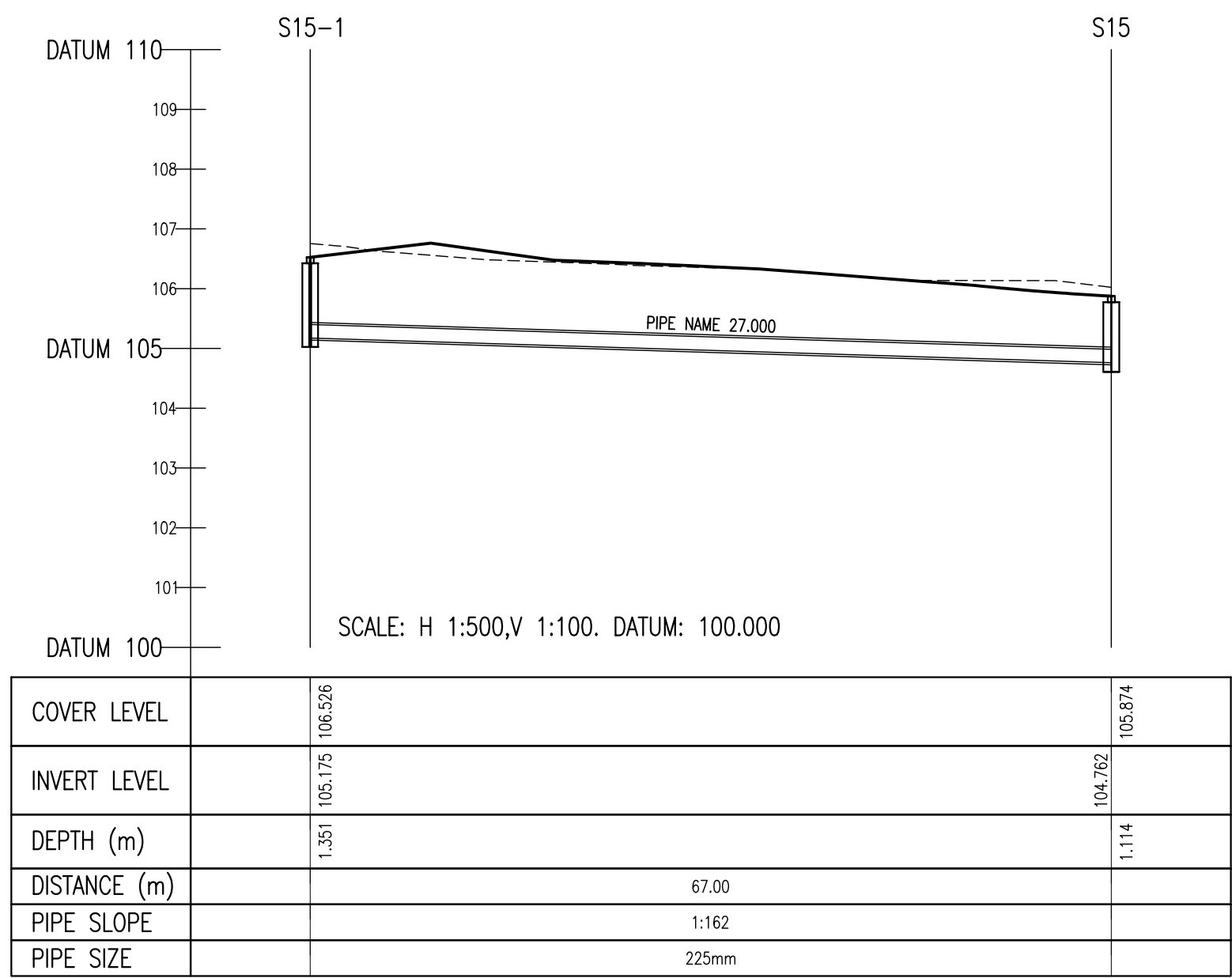
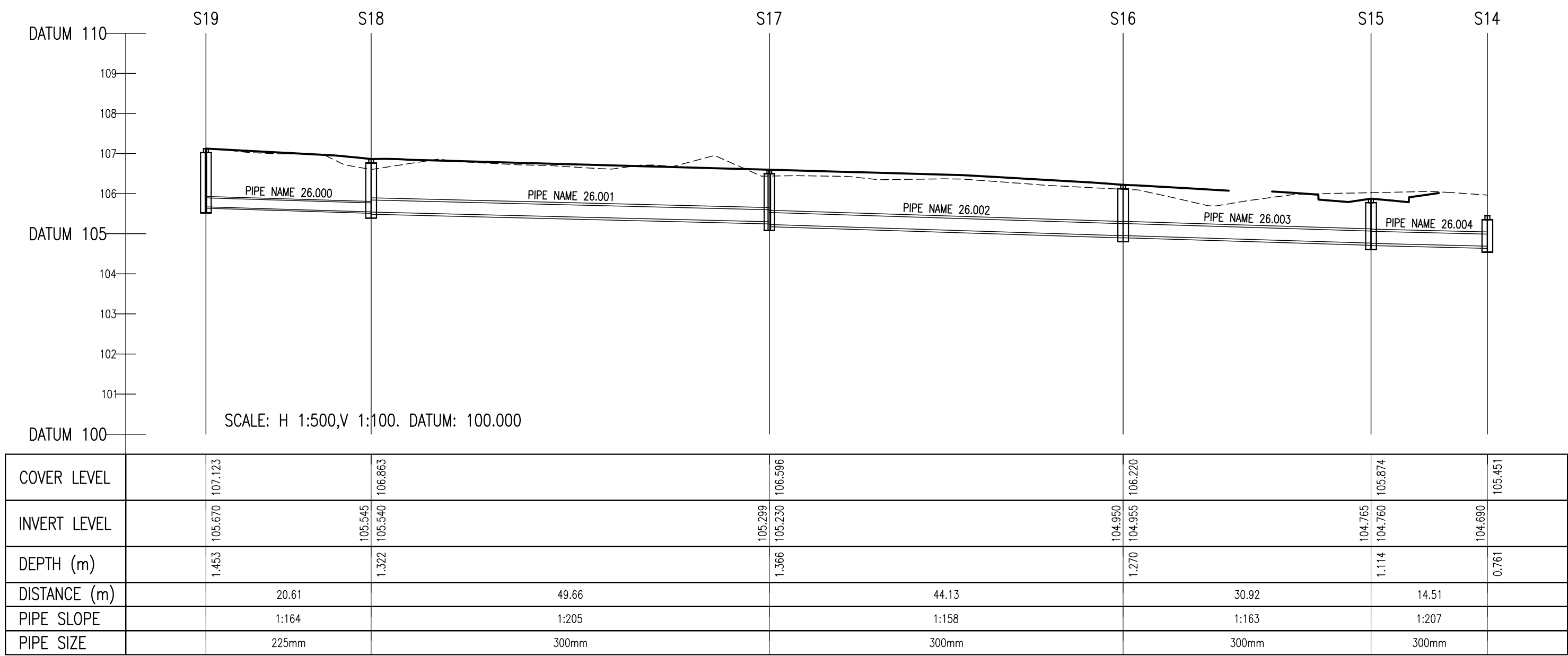
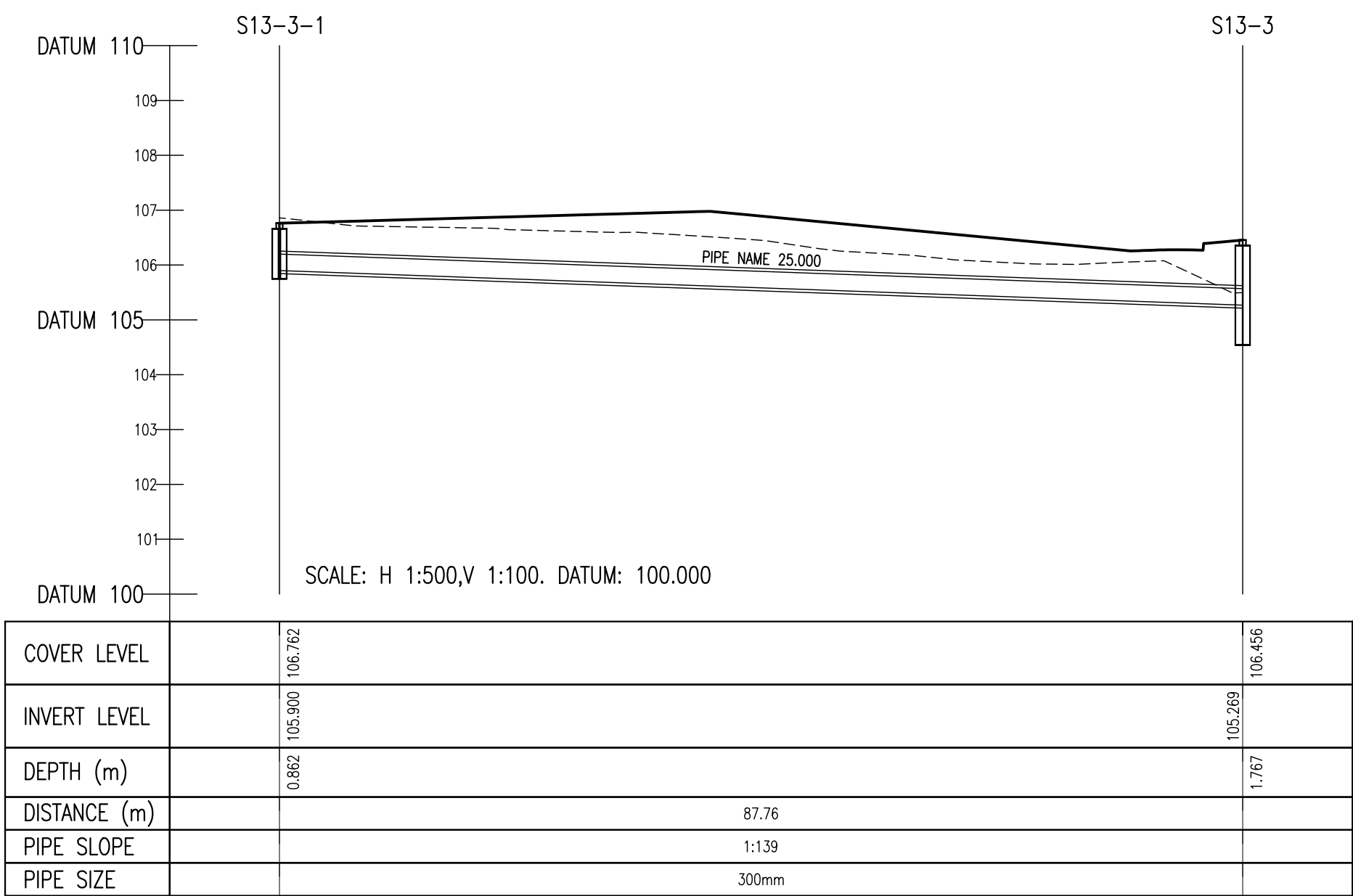
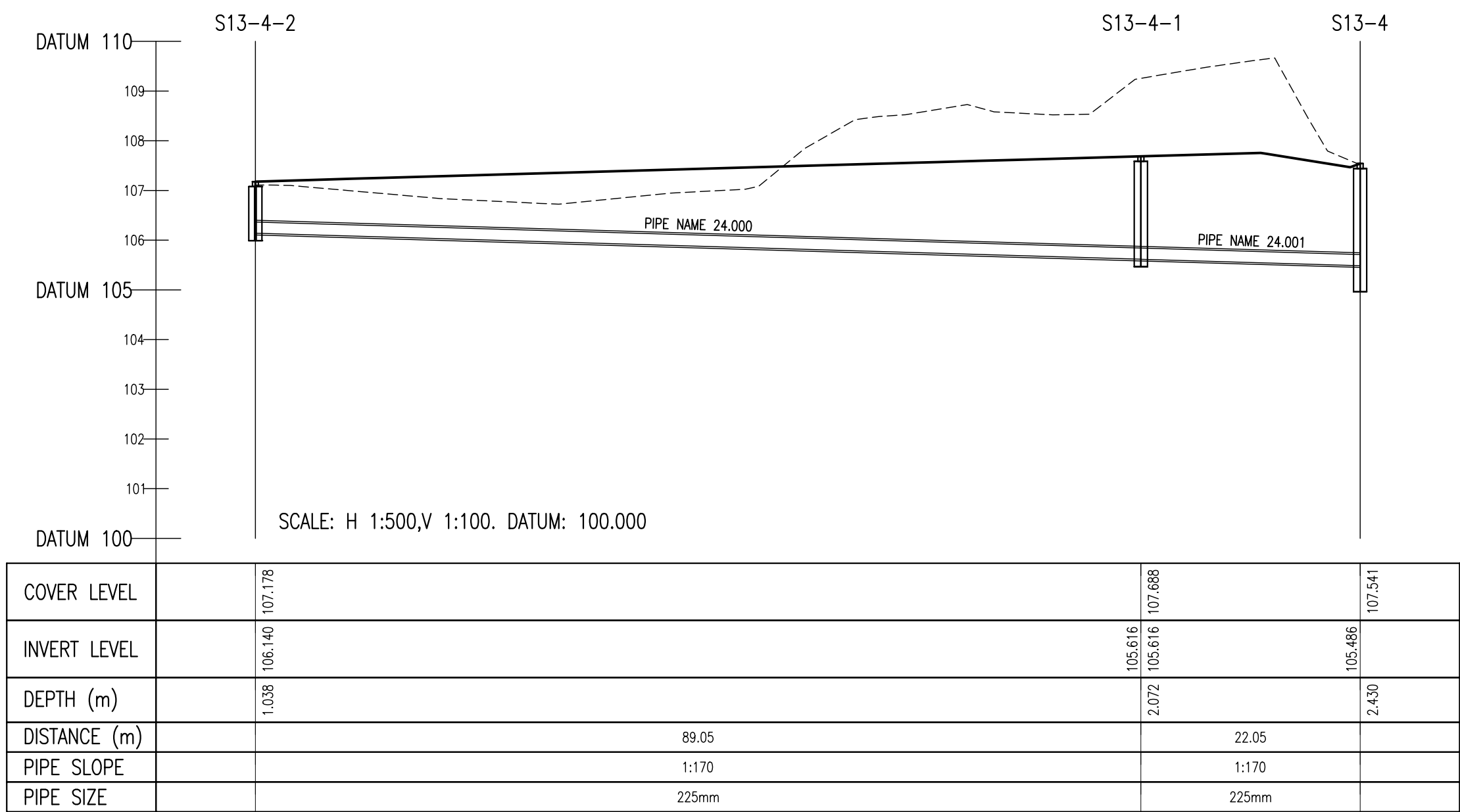
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PROJECT
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GARTERS LANE RESIDENTIAL
DEVELOPMENT

DRG. TITLE
SURFACE WATER
LONG SECTION
SHEET 6 OF 7

CLIENT
GREENACRE RESIDENTIAL DAC

SCALE	AS SHOWN @A1	FILE REF.	162073-3081
DRG. NO.	162073-3086		A



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DBFL DBFL Consulting Engineers 08BUN OFFICE Ormond House, Upper Ormond Quay, Dublin 7, Ireland. PHONE +353 1 400 4000 FAX +353 1 400 4050 WATERFORD OFFICE Unit 2, The Chandlery, 1-2 O'Connell Street, Waterford, Ireland. PHONE +353 51 309 550 FAX +353 51 844 913 EMAIL info@dbfl.ie SITE www.dbfl.ie				

PROJECT

FORTUNESTOWN LANE & GARTERS LANE RESIDENTIAL DEVELOPMENT

DRG. TITLE

SURFACE WATER
LONG SECTION
SHEET 7 OF 7

CLIENT

GREENACRE RESIDENTIAL DAC

SCALE	AS SHOWN @A1	FILE REF.	162073-3081
DRG. NO.	162073-3087		A