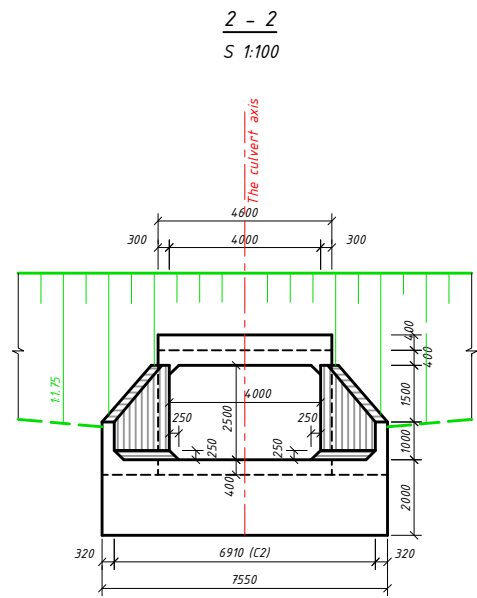
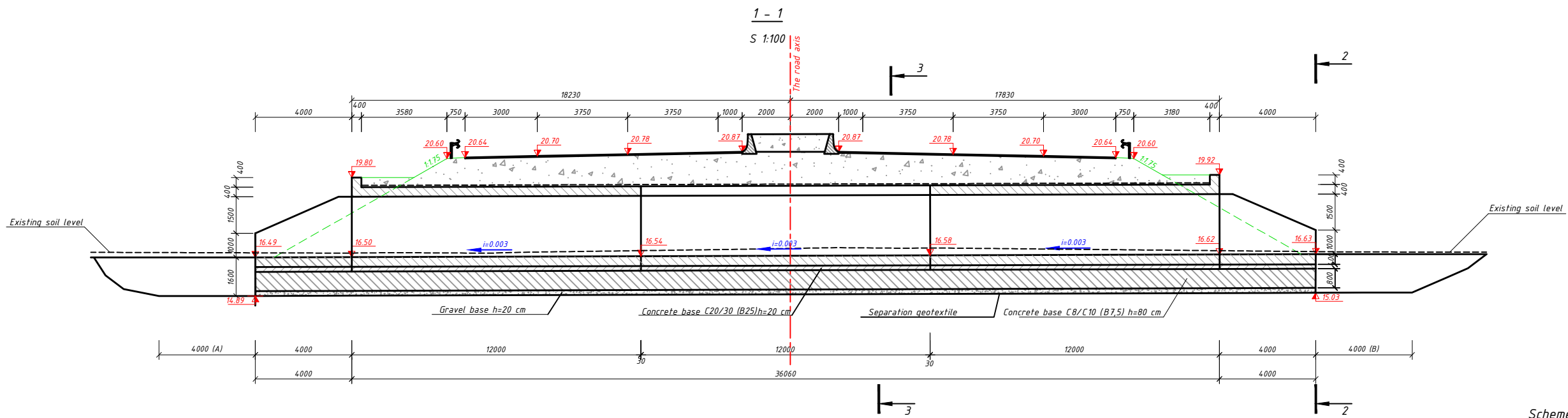
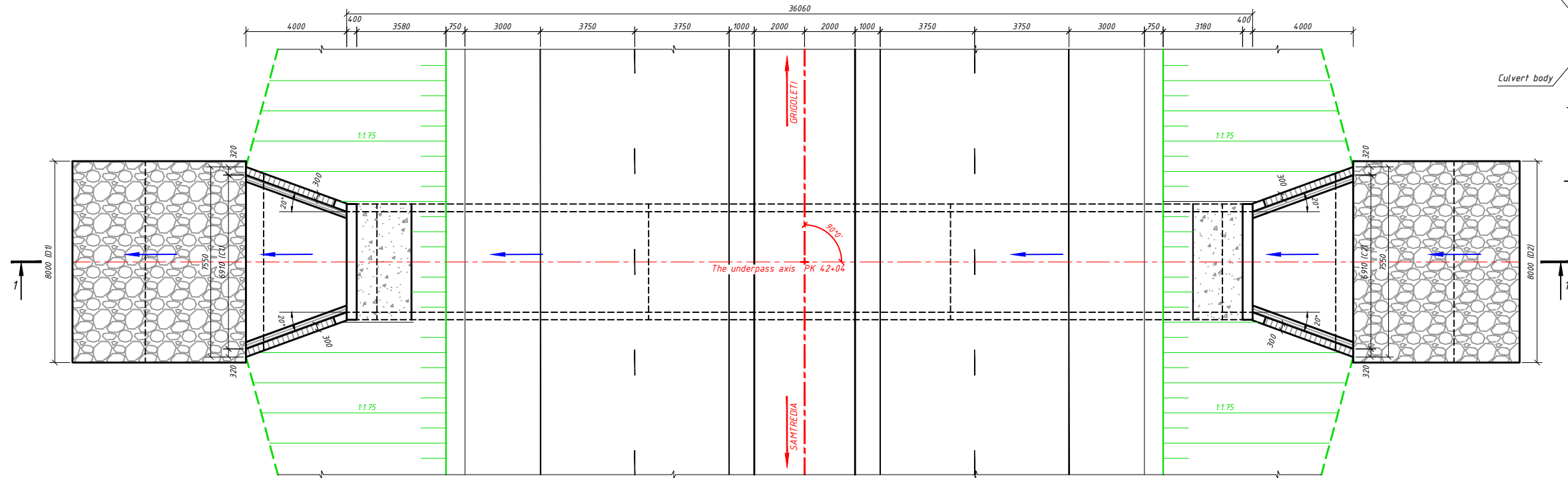
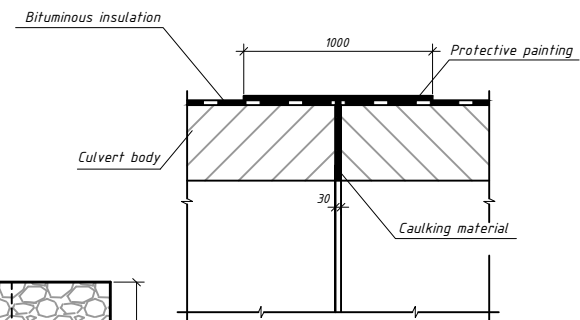




Scheme at waterproofing joints
S 1:20



Staking scheme of culvert Table of coordinates

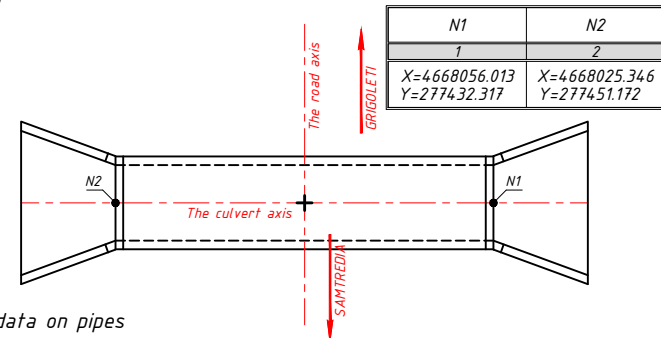
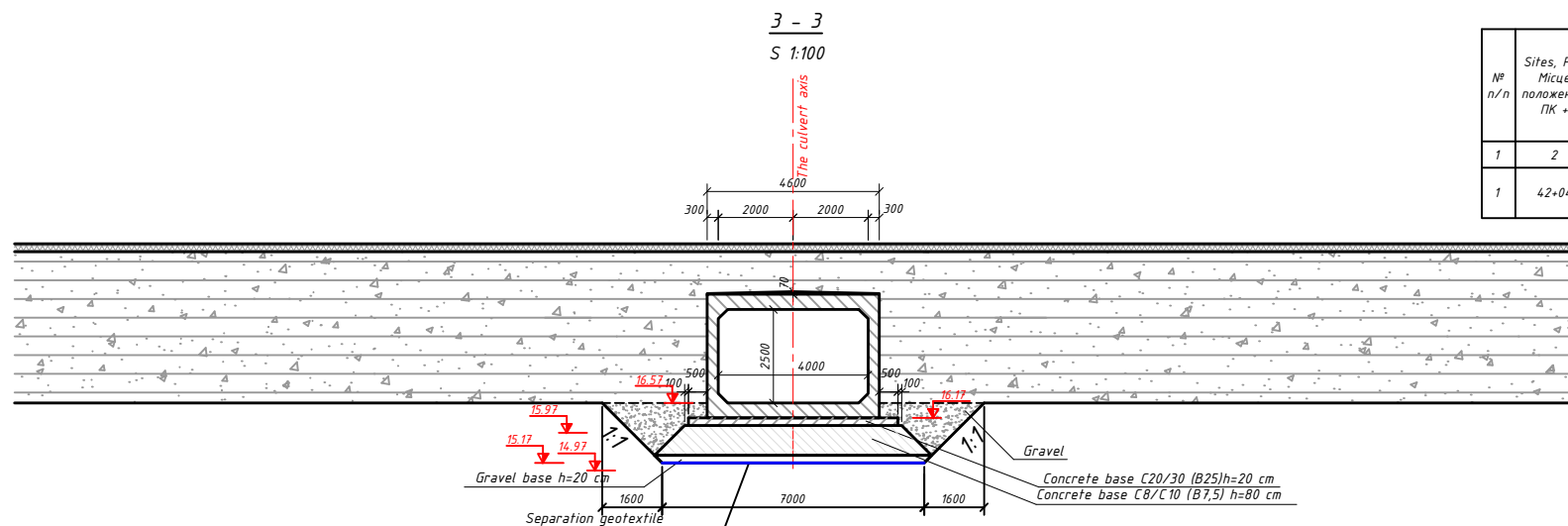
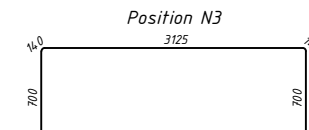
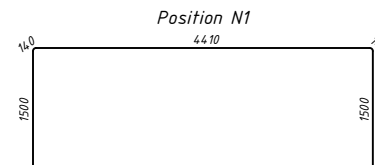
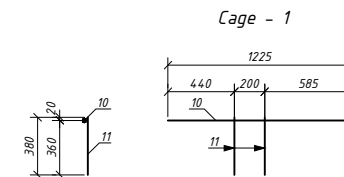
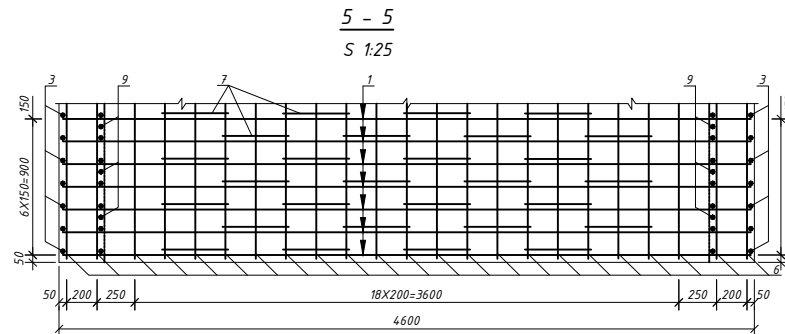
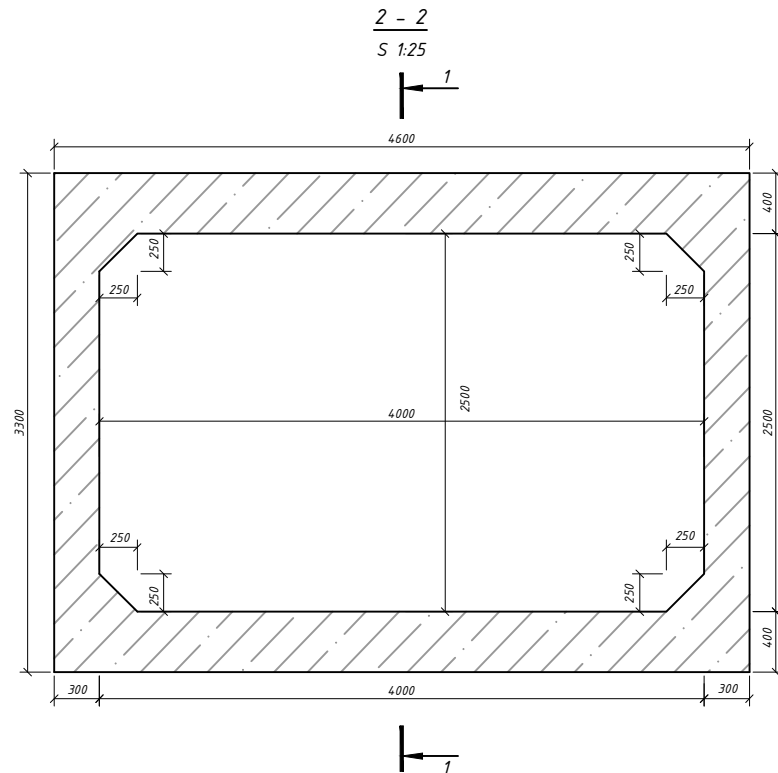
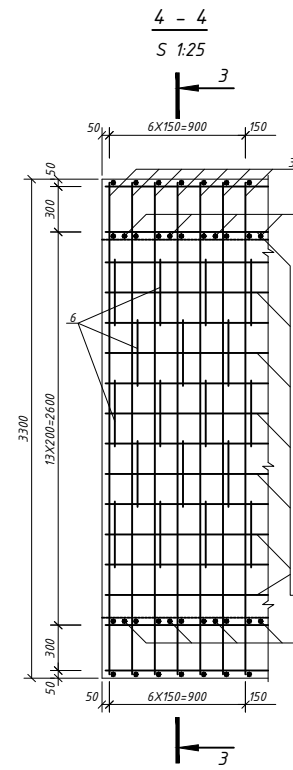
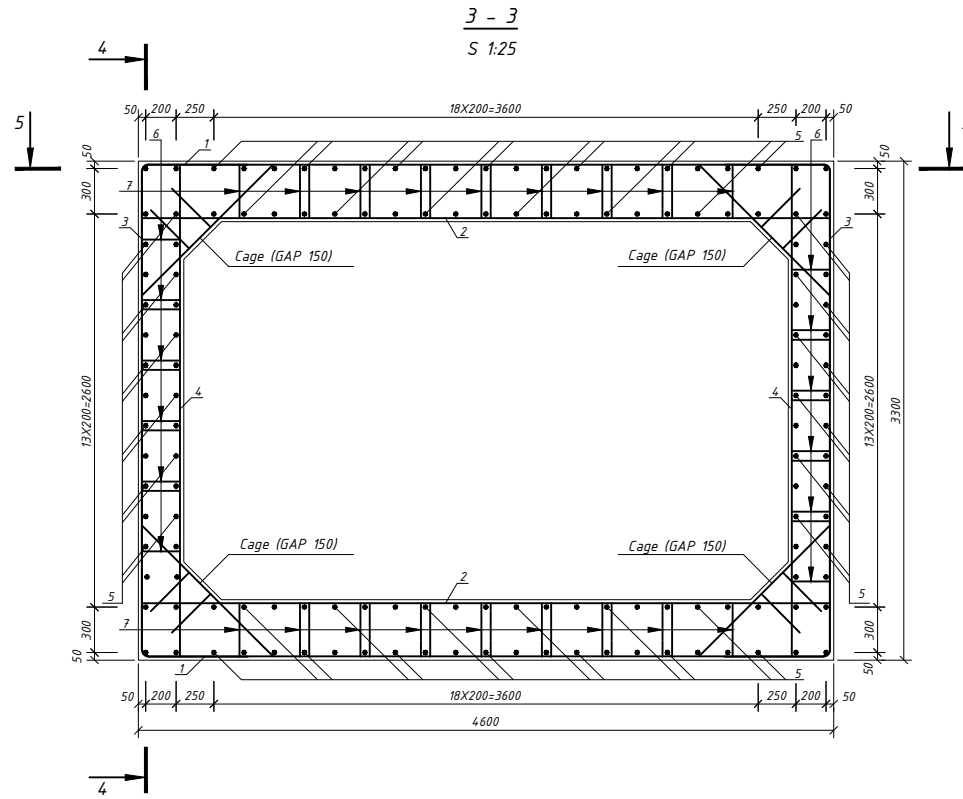
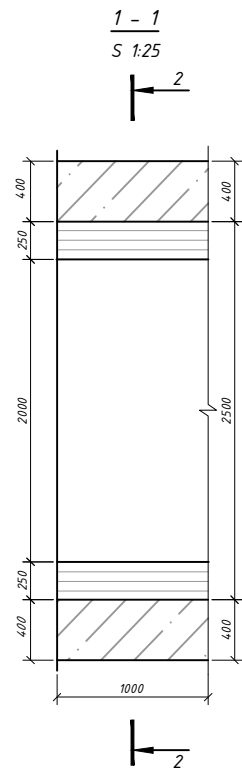


Table of design data on pipes

№ n/n	Sites, PK+ Місце положення, ПК +	The angle of intersection with the road deg.°	Input headroom, left / right	Opening pipe, m	Slant pipe, %	Length, m		Options trays/building, m						Signs, m						Remarks
						without inlet and outlet, m	with inlet and outlet, m	D1	D2	A	B	C1	C2	tray input headroom	tray output headroom	brow (right)	brow (left)	top input headroom	top output headroom	
1	42+04	90°0'	right	4,00x2,50	3	36,060	44,060	8,000	8,000	4,00	4,00	6,910	6,910	16,62	16,50	20,60	20,60	19,92	19,80	Underpass



E-60-00-WD-01-H1-HP.01-P1				Construction of the road Santredia - Grigoleti km 0 +000 - km 11 +500			
Engineer	R.Harlander			Proj.Manag	O.Valuikin	11.14	
Checked by	M.Gorobinskaya	11.14		Exec. by	M.Voroshnylov	11.14	
Highway. Section PK 40+00 - PK 50+00				Stage	WD	1	3
Culvert: Opening 4,00x2,50m PK42+04				"Road Building" Altcom LLC			

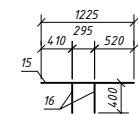
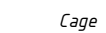
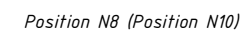
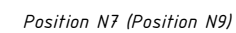
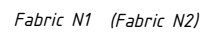


	Steel specification for 1 meter						Steel specification for 1 section (12 m)			Steel specification for 3 section (36 m)		
	Position	Sketch, mm	Diameter or section, mm	Length, mm	Quantity, unit	Total length, m	Length, mm	Quantity, unit	Total length, m	Length, mm	Quantity, unit	Total length, m
Separate bars	1	Is given on drawing	18A-III	7 690	14	107,660	7 690	168	1 291,920	7 690	504	3 875,760
	2	4550	25A-III	4 550	14	63,700	4 550	168	764,400	4 550	504	2 293,200
	3	Is given on drawing	18A-III	4 805	14	67,270	4 805	168	807,240	4 805	504	2 421,720
	4	3250	18A-III	3 250	14	45,500	3 250	168	546,000	3 250	504	1 638,000
	5	1000	16A-III	1 000	140	140,000	11 950	140	1 673,000	11 950	420	5 019,000
	6	326 426 226 526	10A-III	1 504	36	54,144	1 504	432	649,728	1 504	1 296	1 949,184
	7	426 326 526	10A-III	1 704	56	95,424	1 704	672	1 145,088	1 704	2 016	3 435,264
	8	4550	25A-III	4 550	8	36,400	4 550	96	436,800	4 550	288	1 310,400
	9	3250	18A-III	3 250	6	19,500	3 250	72	234,000	3 250	216	702,000
C (28 un)	10	1225	12A-III	1 225	28	34,300	1 225	336	411,600	1 225	1 008	1 234,800
	11	380	12A-III	380	56	21,280	380	672	255,360	380	2 016	766,080

Selection armature for 1 m			Selection armature for 1 section (12 m)		Selection armature for 3 section (36 m)	
Ø mm and steel grade	The total length, m	Weight, kg	The total length, m	Weight, kg	The total length, m	Weight, kg
10 A-III	14,9,568	92,283	1 794,816	1 107,401	5 384,448	3 322,204
12 A-III	55,580	4,9,355	666,960	592,260	2 000,880	1 776,781
16 A-III	14,0,000	221,200	1 673,000	2 643,340	5 019,000	7 930,020
18 A-III	239,930	4,79,860	2 879,160	5 750,320	8 637,480	17 274,960
25 A-III	100,100	385,385	1 201,200	4 624,620	3 603,600	13 873,860
Total:						
A-III		1 228,083		14 725,942		44 177,826
Binding wire 2%		24,56		294,52		883,56

Remark:
1. Armature adopted in accordance with GOST 5781-82
"Hot-rolled steel for reinforcement of ferroconcrete structures. Specifications"

E-60-00-WD-01-H.1-HP.01-P1				Construction of the road Samtredia - Grigoleti km 0 +000 - km 11 +500			
   	Engineer	DAVID YATES		Highway. Section PK 40+00 - PK 50+00	Stage	Sheet	Sheet
	Proj. Manag.	O. Valukin	11.14		WD	2	3
	Checked by	H. Gorobinskaya	11.14		 "Road Building "Altcom" LLC		
	Exec. by	M. Voroshilov	11.14				
				Culvert. Opening 4,00x2,50m PK42+04			



	Steel specification for one head						Steel specification for two heads		
	Position	Sketch, mm	Diameter or section, mm	Length, mm	Quantity, unit	Total length, m	Length, mm	Quantity, unit	Total length, m
Fabric Net (1 units)	1		12A-III	3 940	24	94,560	3 940	48	189,120
	2		12A-III	L _{aver} =2 013	12	24,156	L _{aver} =2 013	24	48,312
	3		14A-III	L _{aver} =6 058	20	121,160	L _{aver} =6 058	40	242,320
Fabric №2 (1 units)	4		12A-III	3 940	24	94,560	3 940	48	189,120
	5		12A-III	L _{aver} =2 013	12	24,156	L _{aver} =2 013	24	48,312
	6		18A-III	L _{aver} =6 058	20	121,160	L _{aver} =6 058	40	242,320
Separate bars	7	Is given on drawing	18A-III	L _{aver} =3 295	36	118,620	L _{aver} =3 295	72	237,240
	8	Is given on drawing	18A-III	4 040	6	24,240	4 040	12	48,480
	9	Is given on drawing	14A-III	L _{aver} =3 295	36	118,620	L _{aver} =3 295	72	237,240
	10	Is given on drawing	14A-III	4 040	6	24,240	4 040	12	48,480
	11		12A-III	4 200	20	84,000	4 200	40	168,000
	12		12A-III	2 258	32	72,256	2 258	64	144,512
	13		10A-III	1 464	66	96,624	1 464	132	193,248
	14		10A-III	1 704	142	241,968	1 704	284	483,936
C (42 un)	15		18A-III	1 225	84	102,900	1 225	168	205,800
	16		18A-III	400	42	16,800	400	84	33,600

Selection armature for one head			Selection armature for two heads	
$\varnothing$ mm and steel grade	The total length, m	Weight, kg	The total length, m	Weight, kg
10 A-III	338,592	208,911	677,184	417,823
12 A-III	393,688	349,595	787,376	699,190
16 A-III	264,020	319,464	528,040	638,928
18 A-III	383,720	767,440	767,440	1 534,880
Total:				
A-III		1 645,410		3 290,821
Binding wire 2%		32,91	-	65,82

Remark:
1. Armature adopted in accordance with GOST 5781-82 "Hot-rolled steel for reinforcement of ferroconcrete structures. Specifications"

E-60-00-WD-01-H1-HP-01-P1				Construction of the road Samredia - Grigoleti km 0 +000 - km 11 +500			
   	Engineer	DAVID YATES					
 Road Building LLC	Proj.Manag.	O.Valuikin	11.14	Highway. Section PK 4+00 - PK 50+00	Stage	Sheet	Sheets
	Checked by	H.Gorobinskaya	11.14		WD	3	3
	Exec. by	M.Voroshylav	11.14	Culvert. Opening 4,00x2,50m PK42+00	 "Road Building "Altcom" LLC		