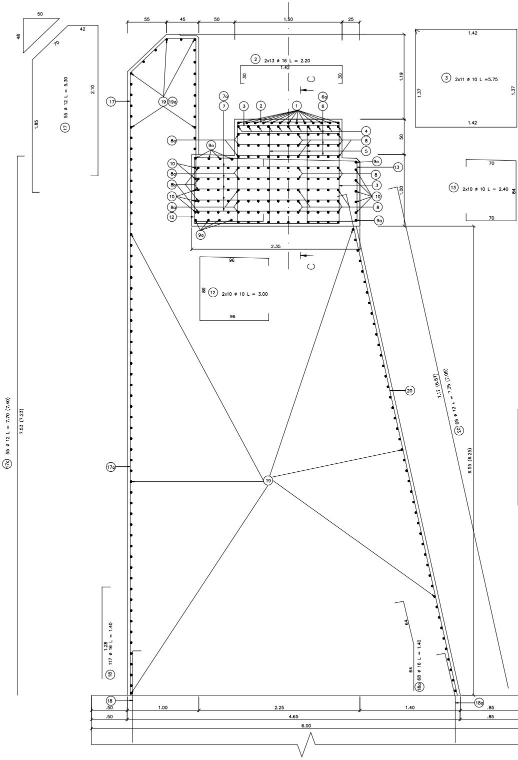
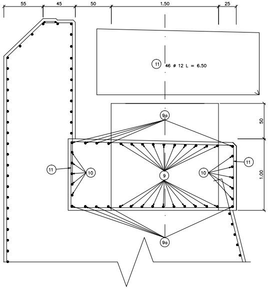
SECTIUNEA A–A
A–A SECTION



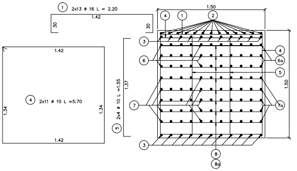
50
48
70
42
1.85
⑰ 55 ø 12 L = 5.30
2.10
⑰a 55 ø 12 L = 7.70 (7.40)
7.53 (7.23)
55
45
50
1.50
25
1.19
50
1.00
② 2x13 ø 16 L = 2.20
1.42
30
30
C
C
1.42
③ 2x11 ø 10 L =5.75
1.37
1.37
1.42
70
⑬ 2x10 ø 10 L = 2.40
84
70
96
89
⑫ 2x10 ø 10 L = 3.00
96
2.35
17
19
19a
7a
7
3
2
1
6a
6
4
8
5
8a
9a
13
10
8a
8b
10
8a
12
9a
3
10
8
9a
20
7.17 (6.87)
⑳ 68 ø 12 L = 1.35 (7.05)
6.55 (6.25)
17a
19
1.28
⑱ 117 ø 16 L = 1.40
64
64
⑱a 68 ø 16 L = 1.40
18
18a
.50
1.00
2.25
1.40
.85
.50
4.65
.85
6.00

SECTIUNEA B–B
B–B SECTION



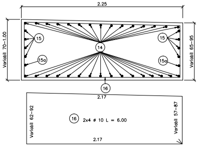
55
45
50
1.50
25
⑪ 46 ø 12 L = 6.50
50
1.00
9a
11
10
9
10
11
9a

SECTIUNEA C–C
C–C SECTION

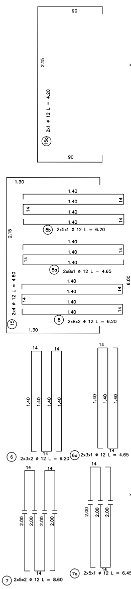


① 2x13 ø 16 L = 2.20
1.42
30
30
1.42
④ 2x11 ø 10 L =5.70
1.34
1.34
1.42
⑤ 2x4 ø 10 L =1.55
1.37
1.50
1.50
4
1
2
3
6
7
3
4
6a
5
7a
8
8a

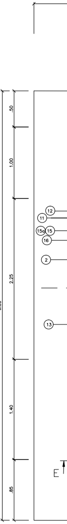
SECTIUNEA D–D
D–D SECTION



2.25
Variabil 70–1.00
Variabil 65–95
15
15a
14
15
15a
16
2.17
⑯ 2x4 ø 10 L = 6.00
Variabil 62–92
Variabil 57–87
2.17

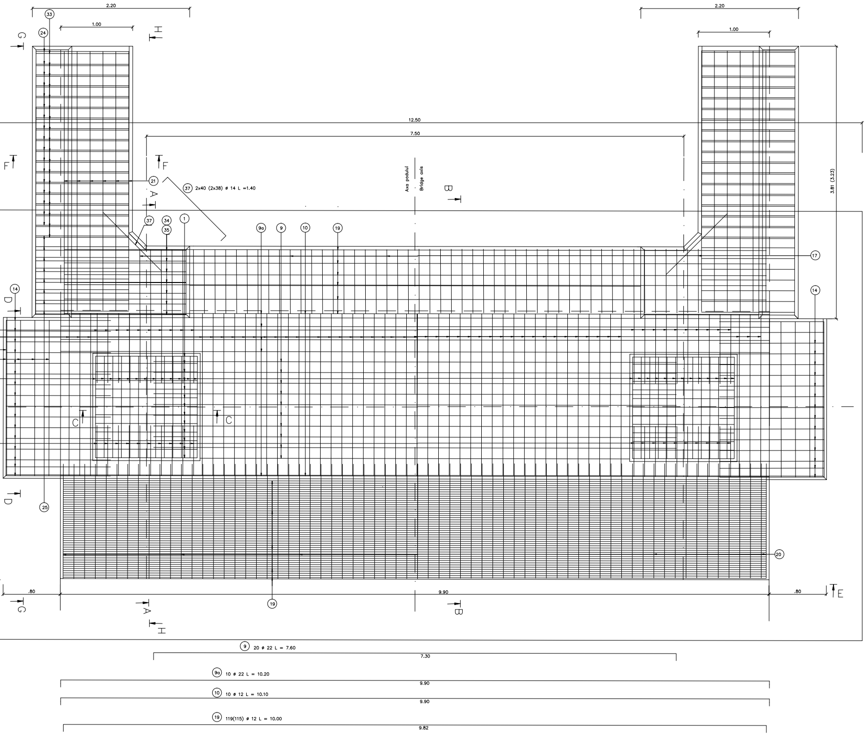


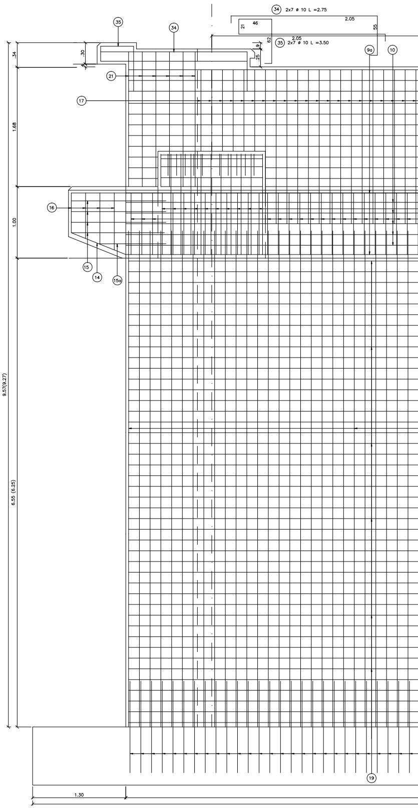
90
2.15
⑮a 2x1 ø 12 L = 4.20
90
1.30
1.40
1.40
1.40
1.40
14
14
14
⑧b 2x5x1 ø 12 L = 6.20
2.15
1.40
1.40
1.40
14
14
⑧a 2x8x1 ø 12 L = 4.65
⑮ 2x4 ø 12 L = 4.80
1.40
1.40
1.40
1.40
14
14
14
⑧ 2x8x2 ø 12 L = 6.20
1.30
14
14
1.40
1.40
1.40
1.40
14
⑥ 2x3x2 ø 12 L = 6.20
14
1.40
1.40
1.40
14
⑥a 2x3x1 ø 12 L = 4.65
14
14
2.00
2.00
2.00
2.00
14
⑦ 2x5x2 ø 12 L = 8.60
14
2.00
2.00
2.00
14
⑦a 2x5x1 ø 12 L = 6.45



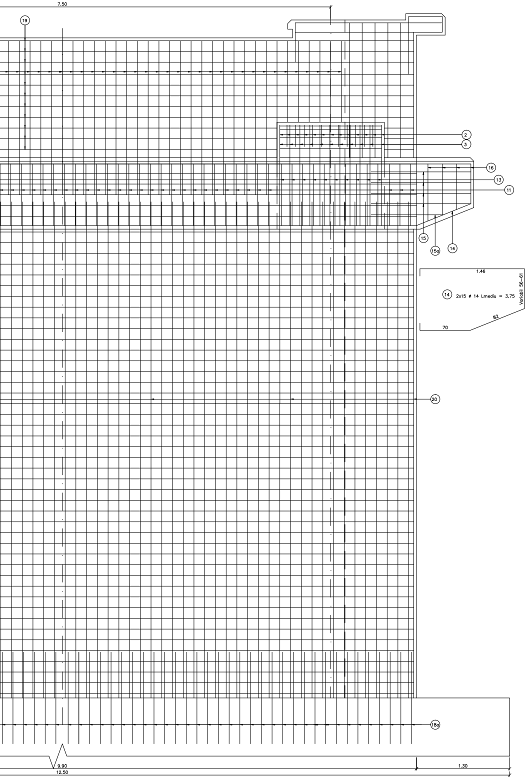
.50
1.00
2.25
1.40
.85
6.00
12
11
15a
15
16
2
13
E

VEDERE IN PLAN
PLAN VIEW

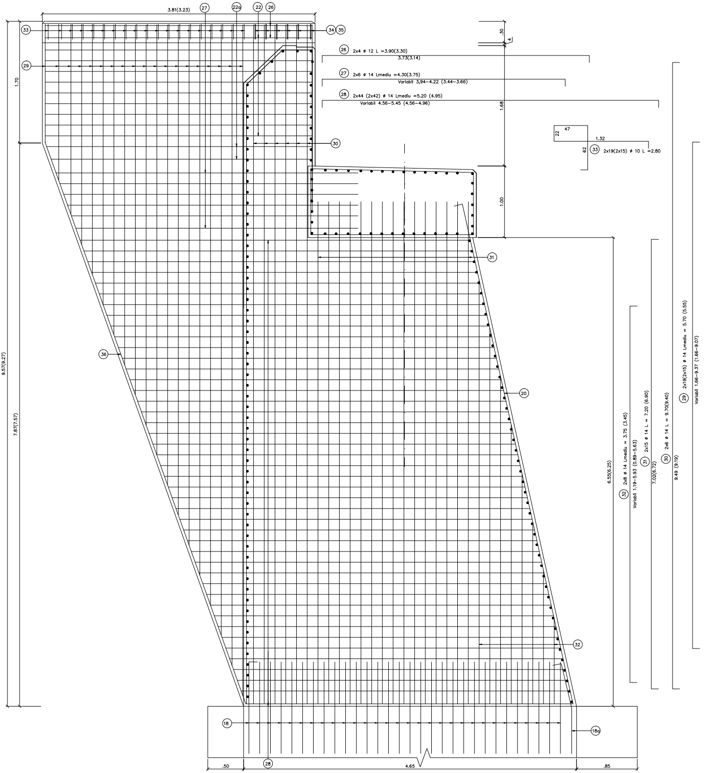

2.20
1.00
2.20
1.00
12.50
7.50
Axa podului
Bridge axis
㉑
㊲ 2x40 (2x38) ø 14 L =1.40
㉞
㉟
①
(9a)
⑨
⑩
⑲
⑰
⑭
㉔
㉝
㉕
⑳
3.81 (3.23)
.80
9.90
.80
A
B
C
D
E
F
G
H
⑨ 20 ø 22 L = 7.60
7.30
(9a) 10 ø 22 L = 10.20
9.90
⑩ 10 ø 12 L = 10.10
9.90
⑲ 119(115) ø 12 L = 10.00
9.82


㉞ 2x7 ø 10 L =2.75
2.05
46
21
55
62
2.05
㉟ 2x7 ø 10 L =3.50
9
.25
.30
.34
(9a)
⑩
㉑
⑰
⑯
⑮
⑭
(15a)
1.68
1.00
9.57(9.27)
6.55 (6.25)
⑲
1.30

VEDERE E–E
E–E VIEW

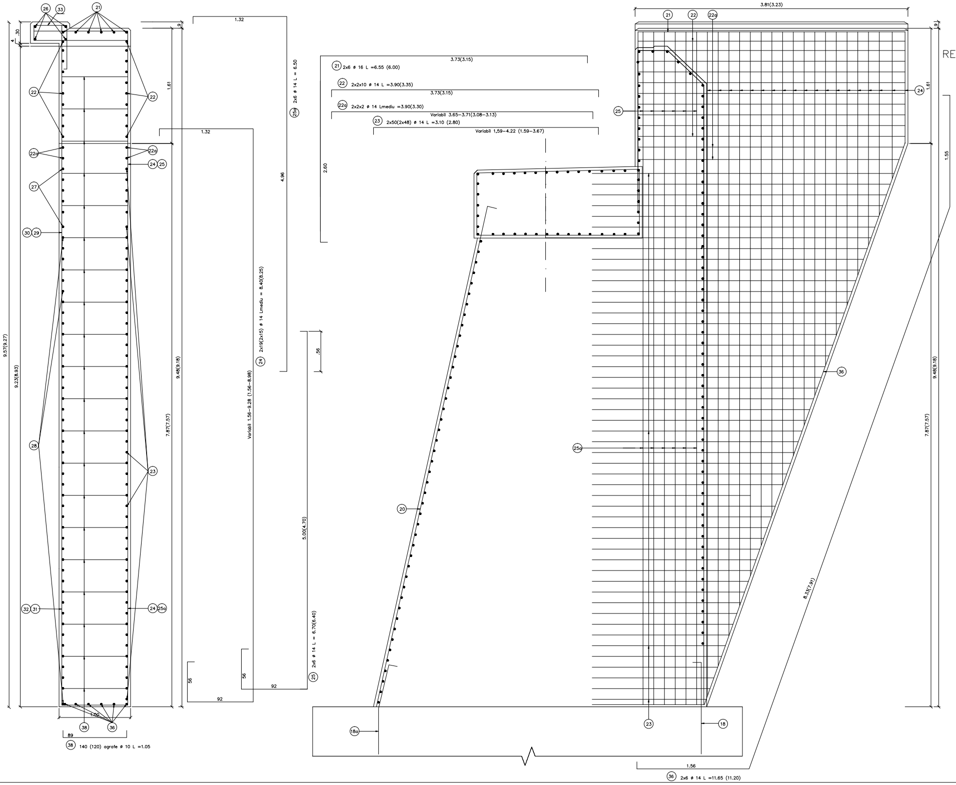

7.50
19
2
3
16
13
11
15
15a
14
1.46
14 2x15 ø 14 Lmediu = 3.75
Variabil 56–61
70
82
20
18a
9.90
12.50
1.30

VEDERE G–G
G–G VIEW


3.81(3.23)
27
22a
22
26
33
34
35
29
.30
4
26 2x4 ø 12 L =3.90(3.30)
3.73(3.14)
27 2x6 ø 14 Lmediu =4.30(3.75)
Variabil 3,94–4.22 (3.44–3.66)
28 2x44 (2x42) ø 14 Lmediu =5.20 (4.95)
Variabil 4.56–5.45 (4.56–4.96)
1.68
1.70
30
22
47
1.32
62
33 2x19(2x15) ø 10 L =2.80
1.00
31
9.57(9.27)
7.87(7.57)
36
20
6.55(6.25)
32 2x8 ø 14 Lmediu = 3.75 (3.45)
Variabil 1.19–5.93 (0.89–5.63)
31 2x15 ø 14 L = 7.20 (6.90)
7.02(6.72)
30 2x6 ø 14 L = 9.70(9.40)
9.49 (9.19)
29 2x19(2x15) ø 14 Lmediu = 5.70 (5.55)
Variabil 1.66–9.37 (1.66–9.07)
32
18
18a
.50
28
4.65
.85

SECTIUNEA F–F
F–F SECTION

VEDERE H–H
H–H VIEW



26
33
21
.30
4
9
1.32
1.61
22
22a
24 25
27
30 29
28
23
32 31
24 25a
9.57(9.27)
9.23(8.93)
9.48(9.18)
7.87(7.57)
1.00
89
38
36
38 140 (120) agrafe ø 10 L =1.05
25a 2x6 ø 14 L = 6.50
4.96
24 2x19(2x15) ø 14 Lmediu = 8.40(8.25)
Variabil 1.56–9.28 (1.56–8.98)
56
92
.56
5.00(4.70)
25 2x6 ø 14 L = 6.70(6.40)
2.60
3.73(3.15)
21 2x6 ø 16 L =6.55 (6.00)
22 2x2x10 ø 14 L =3.90(3.35)
22a 2x2x2 ø 14 Lmediu =3.90(3.30)
Variabil 3.65–3.71(3.08–3.13)
23 2x50(2x48) ø 14 L =3.10 (2.80)
Variabil 1,59–4.22 (1.59–3.67)
3.81(3.23)
21
22
22a
24
25
25a
20
36
18a
23
18
1.55
8.33(7.91)
1.56
36 2x6 ø 14 L =11.65 (11.20)

EXTRAS DE ARMARE CULEEA ODORHEI
REINFORCEMENT TABLE ODORHEI ABUTMENT

Marca	Diametrul	Numar bucati asemenea	Lungimea/ bucata	Lungimi/diametre				
				S355			S345	
				ø10mm	ø12mm	ø14mm	ø16mm	ø20mm
1	16	26	2.20				57.20	
2	16	26	2.20				57.20	
3	10	22	5.75	126.5				
4	10	22	5.70	125.4				
5	10	8	1.55	12.4				
6	12	12	6.20		74.4			
6a	12	6	4.65		27.9			
7	12	20	8.60		172			
7a	12	10	6.45		64.5			
8	12	32	6.20		198.4			
8a	12	16	4.65		74.4			
8b	12	10	6.20		62			
9	22	20	7.60					152
9a	22	10	10.20					102
10	12	10	10.10		101			
11	12	46	6.50		299			
12	10	20	3.00	60				
13	10	20	2.40	48				
14	14	30	3.75			112.5		
15	12	8	4.80		38.40			
15a	12	2	4.20		8.40			
16	10	8	6.00	48				
17	12	55	5.30		291.5			
17a	12	55	7.70		423.50			
18	16	117	1.40				163.80	
18a	16	68	1.40				95.2	
19	12	119	10.00		1190			
20	12	68	7.35		499.80			
21	16	12	6.55				78.60	
22	14	40	3.90			156		
22a	14	8	3.90			31.20		
23	14	100	3.10			310		
24	14	38	8.40			319.20		
25	14	12	6.70			80.40		
25a	14	12	6.50			78		
26	12	8	3.90		31.20			
27	14	12	4.30			51.60		
28	14	88	5.20			457.60		
29	14	38	5.70			216.60		
30	14	12	9.70			116.40		
31	14	30	7.20			216		
32	14	16	3.75			60		
33	10	38	2.80	106.4				
34	10	14	2.75	38.5				
35	10	14	3.50	49				
36	14	12	11.65			139.8		
37	14	80	1.40			112		
38	10	140	1.05	147				
Lungimea / diametre (m)				761.20	3556.40	2457.30	452	254
Greutatea/m (kg/m)				0.617	0.888	1.208	1.578	2.990
Greutatea/diametre (kg)				469.66	3158.08	2968.42	713.26	759.46
Greutatea totala (kg)				8068.88				
Greutatea rotunjita (kg)				8 070				

NOTA Inaltimile culeilor si lungimile zidurilor de garda pentru cele 2 culei sunt diferite. Cotele si
Reprezentarea grafica din plan este pentru culeea Odorhei.

EXTRAS DE ARMARE CULEEA SIGHISOARA

REINFORCEMENT TABLE SIGHISOARA ABUTMENT

Marca	Diametrul	Numar bucati asemenea	Lungimea/ bucata	Lungimi/diametre				
				S355			S345	
				ø10mm	ø12mm	ø14mm	ø16mm	ø20mm
1	16	26	2.20				57.20	
2	16	26	2.20				57.20	
3	10	22	5.75	126.5				
4	10	22	5.70	125.4				
5	10	8	1.55	12.4				
6	12	12	6.20		74.4			
6a	12	6	4.65		27.9			
7	12	20	8.60		172			
7a	12	10	6.45		64.5			
8	12	32	6.20		198.4			
8a	12	16	4.65		74.4			
8b	12	10	6.20		62			
9	22	20	7.60					152
9a	22	10	10.20					102
10	12	10	10.10		101			
11	12	46	6.50		299			
12	10	20	3.00	60				
13	10	20	2.40	48				
14	14	30	3.75			112.5		
15	12	8	4.80		38.40			
15a	12	2	4.20		8.40			
16	10	8	6.00	48				
17	12	55	5.30		291.5			
17a	12	55	7.40		407			
18	16	117	1.40				163.80	
18a	16	68	1.40				95.2	
19	12	115	10.00		1150			
20	12	68	7.05		479.40			
21	16	12	6.00				72	
22	14	40	3.35			134		
22a	14	8	3.30			26.40		
23	14	96	2.80			268.8		
24	14	30	8.25			247.5		
25	14	12	6.40			76.80		
25a	14	12	6.50			78		
26	12	8	3.30		26.4			
27	14	12	3.75			45		
28	14	84	4.95			415.80		
29	14	30	5.55			166.50		
30	14	12	9.40			112.80		
31	14	30	6.90			207		
32	14	16	3.45			55.20		
33	10	30	2.80	84				
34	10	14	2.75	38.5				
35	10	14	3.50	49				
36	14	12	11.20			134.40		
37	14	76	1.40			106.40		
38	10	120	1.05	126				
Lungimea / diametre (m)				717.80	3474.70	2187.10	445.40	254.00
Greutatea/m (kg/m)				0.617	0.888	1.208	1.578	2.990
Greutatea/diametre (kg)				442.89	3085.54	2642.02	702.85	759.46
Greutatea totala (kg)				7632.76				
Greutatea rotunjita (kg)				7640				

dimensiunile din paranteze sunt valabile pentru culeea Sighisoara..

Beton armat/Reinforced concrete:	– C35/45 bancheta, zid de garda/ bench,wall guard – C25/30 elevatie, ziduri intoarse/ elevation, reverted walls
Armatura / reinforcement:	–S355 (PC 52; ø10–ø14) –S345 (PC 52; ø16)
Strat de acoperire/concrete cover	– min. 4cm expunere in aer/air exposed

NOTA/NOTE

Pentru mentinerea pozitiei corecte in timpul betonarii, se vor monta distantieri minim 4buc./m^2. Distantierii trebuie legati cu sarma de carcasa de armatura.

In order to maintain the correct position during concreting, minimum 4pcs./m^2 distance pieces shall be mounted. The distance pieces shall be connected to the reinforcing framework, using wire.

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Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer	Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR
D					
C					
B					
A					

GUVERNUL ROMANIEI
ROMANIAN GOVERNMENT

PROIECT FINANŢAT DE UNIUNEA EUR
EUROPEAN UNION FINANCED P

CLIENT / CLIENT

C.N.C.F. "C.F.R." - S.A.

ITALFERR
GRUPPO FERROVIE DELLO STATO
Joint Venture leader

Scott Wilson

OBERMEYER
PLANEN + BERATEN GmbH

TECNIC
Consulting Engineers

CONSULTANT / CONSULTANT

			Data Date	Semnătură Signature
Aprobat Approved	Şef proiect Project manager	R. Liuzza		
Aprobat Approved	Coordonator Secţiune 1 Section 1 Coordinator	C. Gambelli		
Verificat Checked	Expert Cheie Checking Expert	V. Kallidromitis		

SUBCONTRACTANT / SUBCONTRACTOR

AREX Lider COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A.Stanciu - Dinulescu	03.2012	
Întocmit Elaborated	Proiectant Designer	Constantin Miculete	03.2012	

Reabilitarea liniei de cale ferata Brasov - Simeria, parte componentă a coridorului IV Pan European, pentru circulaţia trenurilor cu viteza maximă de 160 km/h,
Tronsonul : Brasov - Sighisoara
Rehabilitation of the railway line Brasov - Simeria, component Part of the IV Pan-European Corridor, for the trains circulation with maximum speed of 160 km/h,
Section : Brasov - Sighisoara

Proiect/Project
2004/RO/16/P/PA/003

Faza / Phase:
D.E. / E.D.

Denumire desen / Drawing Title :
Interval ARCHITA-VANATORI
POD/BRIDGE Km.269+868,472 L=45.00m

PLAN ARMARE CULEI CALE SIMPLA
ABUTMENTS REINFORCEMENT SIMPLE RAILWAY TRACK

Codificare / Codification System	Scara / Scale 1:20	LOT / LOT	Nr. / No 01 / 01
EA51 01 E 16 BC PV 04 1 2 011 0			

594 X 3688