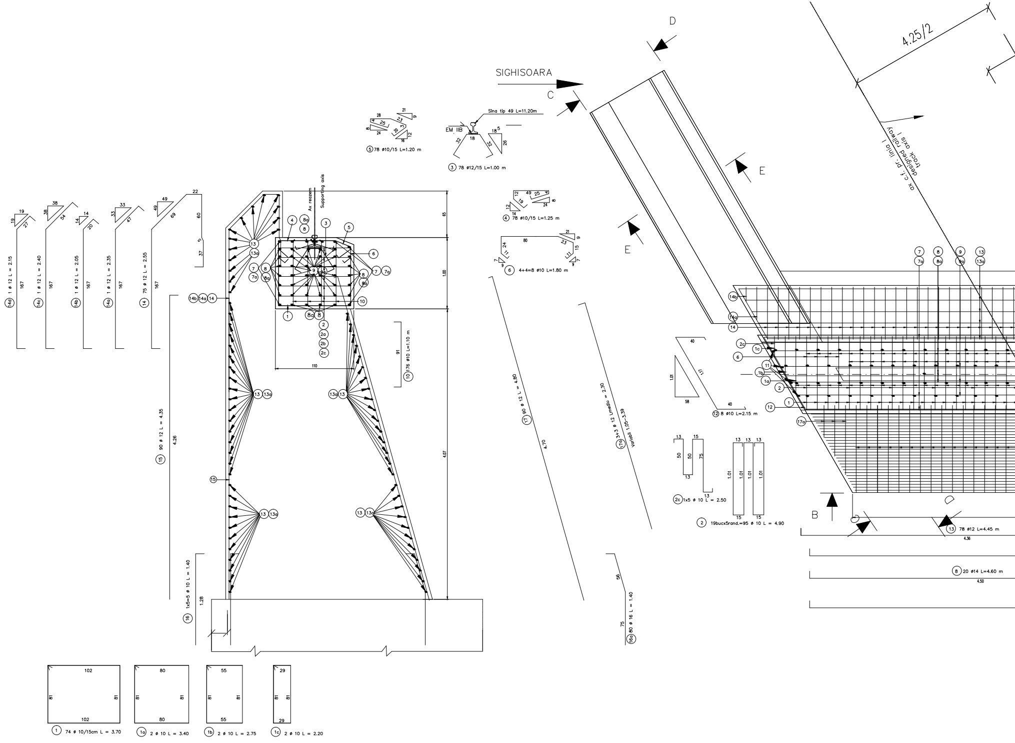
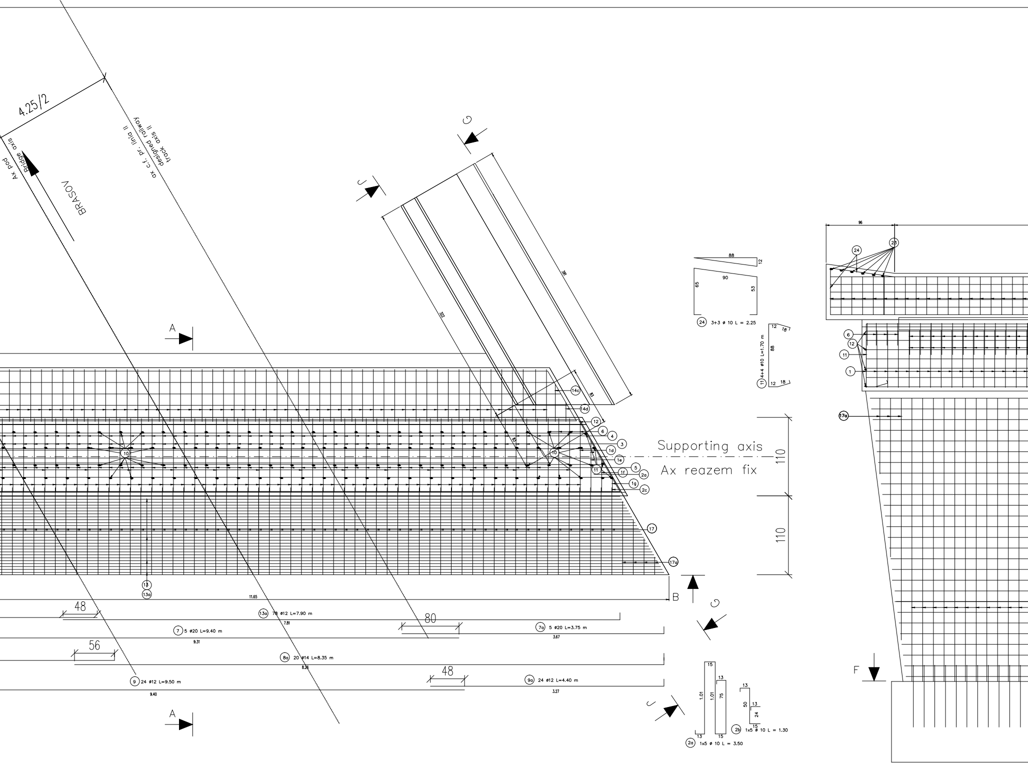
SECTIUNEA A–A SECTION
Sc. 1:50

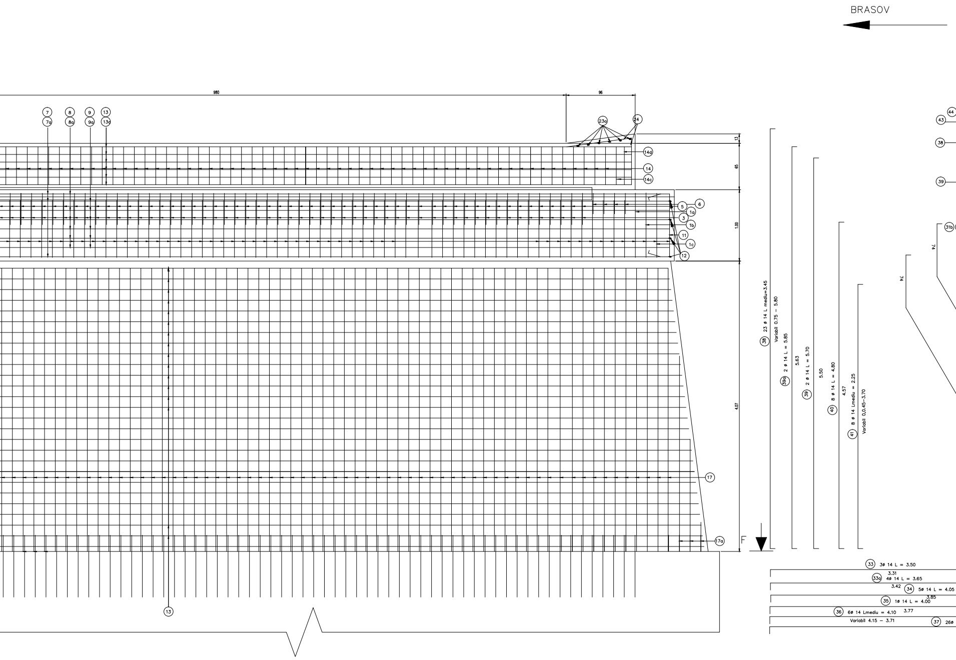
VEDERE IN PLAN/ PLAN VIEW
Sc. 1:50


SIGHISOARA
D
C
E
E
B
4.25/2
ax c.f. pr. linia I
designed railway
(track axis I)
Ax reazem
Supporting axis
Sina tip 49 L=11.20m
EM IIB
⑤ 78 ø10/15 L=1.20 m
③ 78 ø12/15 L=1.00 m
④ 78 ø10/15 L=1.25 m
⑥ 4+4=8 ø10 L=1.80 m
⑫ 8 ø10 L=2.15 m
(14d) 1 ø 12 L = 2.15
(14c) 1 ø 12 L = 2.40
(14b) 1 ø 12 L = 2.05
(14a) 1 ø 12 L = 2.35
⑭ 75 ø 12 L = 2.55
⑮ 90 ø 12 L = 4.35
⑩ 176 ø10 L=1.10 m
⑰ 90 ø 12 L = 4.90
(17a) 3+3 ø 12 Lmediu = 2.30
Variabil 1.05–3.39
⑯ 1x5=5 ø 10 L = 1.40
(16a) 80 ø 16 L = 1.40
(2c) 1x5 ø 10 L = 2.50
② 19bucx5rand.=95 ø 10 L = 4.90
⑬ 78 ø12 L=4.45 m
⑧ 20 ø14 L=4.60 m
① 74 ø 10/15cm L = 3.70
(1a) 2 ø 10 L = 3.40
(1b) 2 ø 10 L = 2.75
(1c) 2 ø 10 L = 2.20
4.26
4.07
4.70
1.00
65
110
91
1.28
4.36
4.50
102
80
55
29
81


4.25/2
Ax pod
Bridge axis
BRASOV
ax c.f. pr. linia II
designed railway
track axis II
G
J
A
B
F
Supporting axis
Ax reazem fix
110
110
24 3+3 ø 10 L = 2.25
88
12
90
65
53
11 4+4 ø10 L=1.70 m
12
18
88
12
18
96
23
24
6
12
11
1
17a
14c
14d
12
6
4
3
1d
1e
5
2a
1f
1g
2c
11
10
10
17
17a
13
13a
11.65
48
13a 78 ø12 L=7.90 m
7.81
80
7 5 ø20 L=9.40 m
9.31
7a 5 ø20 L=3.75 m
3.67
56
8a 20 ø14 L=8.35 m
8.26
48
9 24 ø12 L=9.50 m
9.40
9a 24 ø12 L=4.40 m
3.27
15
13
1.01
1.01
75
13
15
13
50
13
24
15
2a 1x5 ø 10 L = 3.50
2b 1x5 ø 10 L = 1.30

VEDERE B–B VIEW

Sc. 1:50


BRASOV
980
96
7
7a
8
8a
9
9a
13
13a
23a
24
14d
14
14c
5
6
1a
3
1b
11
1c
12
13
65
1.00
4.07
17
17a
F
13
44
43
38
39
31b
74
74
38 23 ø 14 L mediu=3.45
Variabil 0.75 – 5.80
39a 2 ø 14 L = 5.85
5.63
39 2 ø 14 L = 5.70
5.50
40 8 ø 14 L = 4.80
4.57
41 8 ø 14 Lmediu = 2.25
Variabil 0,0.45–3.70
33 3ø 14 L = 3.50
3.31
33a 4ø 14 L = 3.65
3.42
34 5ø 14 L = 4.05
3.85
35 1ø 14 L = 4.00
36 6ø 14 Lmediu = 4.10
3.77
Variabil 4.15 – 3.71
37 26ø

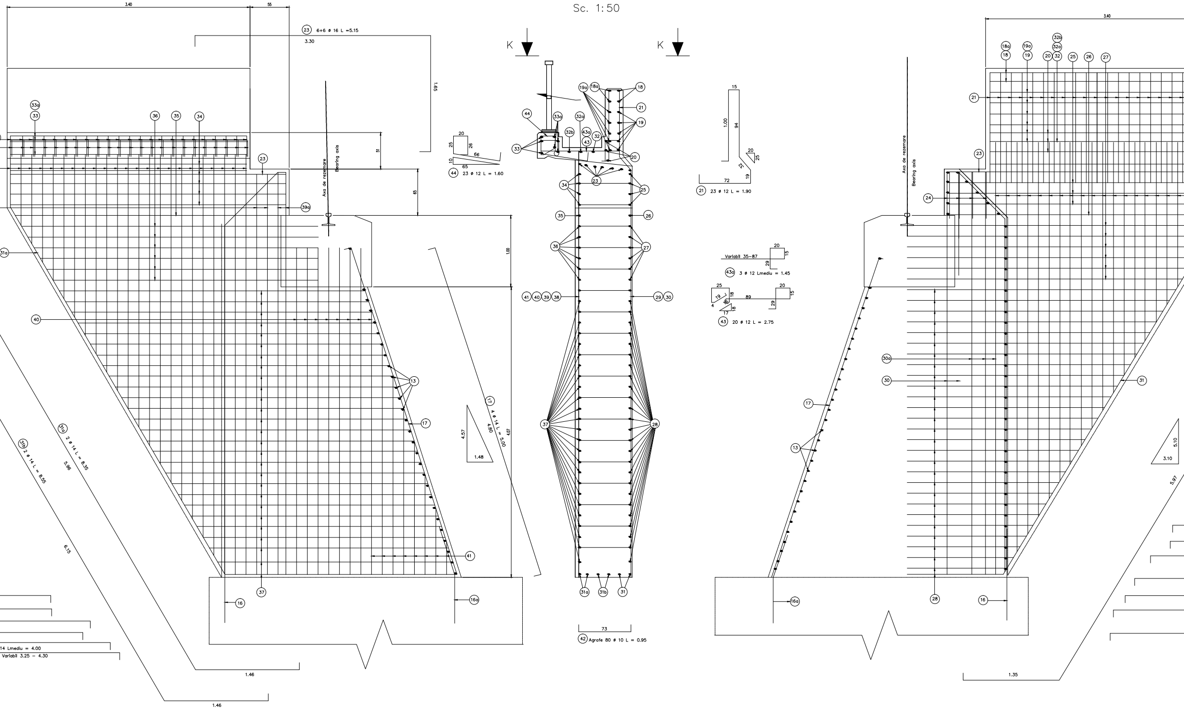
VEDERE C–C VIEW

Sc. 1:50

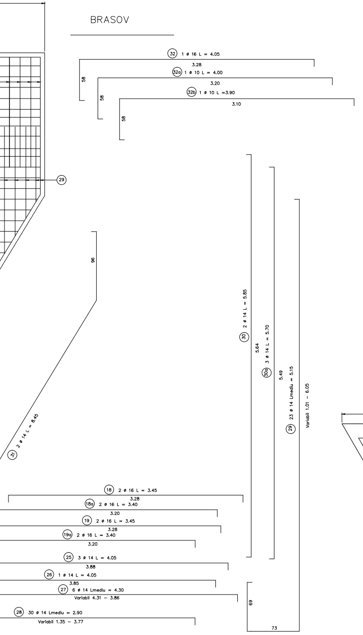
SECTIUNEA E–E SECTION

Sc. 1:50

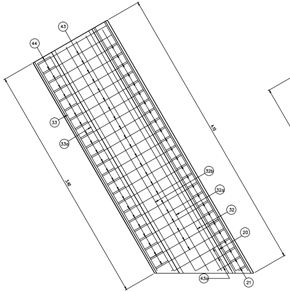
VEDERE D–D VIEW


K
K
3.40
55
(23) 6+6 ø 16 L =5.15
3.30
1.65
51
65
1.00
4.07
Axa de rezemare
Bearing axis
(33a)
(33)
(36)
(35)
(34)
(23)
(39a)
(31a)
(40)
(13)
(17)
(41)
(37)
(16)
(16a)
(17) 4 ø 14 L = 5.00
4.80
4.57
1.48
(31a) 2 ø 14 L = 8.35
5.96
(31b) 2 ø 14 L = 8.55
6.15
14 Lmediu = 4.00
Variabil 3.25 – 4.30
1.46
1.46
20
25
26
66
10
65
(44) 23 ø 12 L = 1.60
(19a) (18a) (18)
(21)
(19)
(44)
(33a)
(32a)
(32b)
(43a)
(43)
(32)
(33)
(20)
(23)
(34)
(25)
(35)
(26)
(36)
(27)
(41) (40) (39) (38)
(29) (30)
(37)
(28)
(31a) (31b) (31)
73
(42) Agrafe 80 ø 10 L = 0.95
15
1.00
94
20
25
32
19
72
(21) 23 ø 12 L = 1.90
Variabil 35–87
29
(43a) 3 ø 12 Lmediu = 1.45
89
18
4
17
(43) 20 ø 12 L = 2.75
3.40
(18a) (18)
(19a) (19)
(32b) (32a) (32)
(20)
(25)
(26)
(27)
(21)
(23)
(24)
(30a)
(30)
(31)
(17)
(13)
5.10
3.10
5.97
(28)
(16a)
(16)
1.35

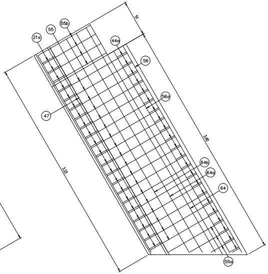
BRASOV

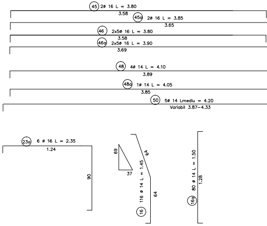

32
1 ø 16 L = 4.05
3.28
58
32a
1 ø 10 L = 4.00
3.20
58
32b
1 ø 10 L =3.90
3.10
58
29
96
31
2 ø 14 L = 8.45
30
2 ø 14 L = 5.85
5.64
30a
3 ø 14 L = 5.70
5.49
29
23 ø 14 Lmediu = 5.15
Variabil 1.01 - 6.05
18
2 ø 16 L = 3.45
3.28
18a
2 ø 16 L = 3.40
3.20
19
2 ø 16 L = 3.45
3.28
19a
2 ø 16 L = 3.40
3.20
25
3 ø 14 L = 4.05
3.88
26
1 ø 14 L = 4.05
3.85
27
6 ø 14 Lmediu = 4.30
Variabil 4.31 - 3.86
28
30 ø 14 Lmediu = 2.90
Variabil 1.35 - 3.77
69
73

VEDERE K–K VIEW

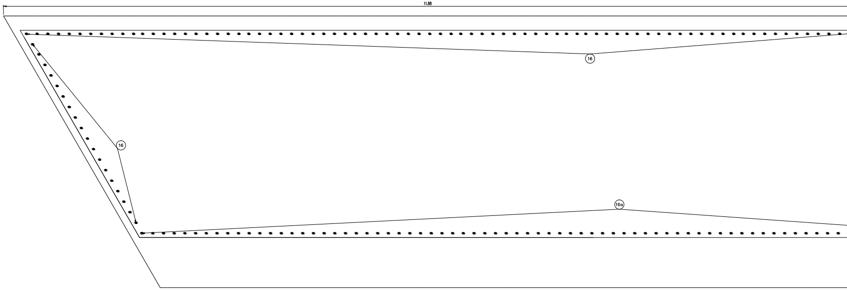

43
44
33
33a
3.40
4.10
32b
32a
32
20
43a
21

VEDERE L–L VIEW

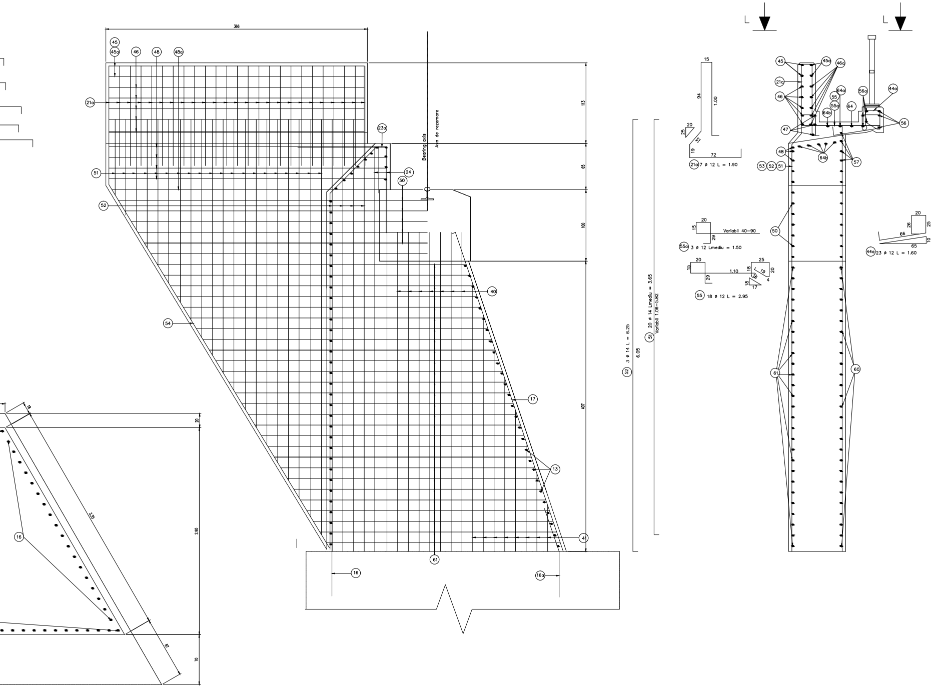

51
21a
55
55b
44a
56
47
56a
3.22
3.40
64b
64a
64
55a


45
2ø 16 L = 3.80
3.58
45a
2ø 16 L = 3.85
3.65
46
2x5ø 16 L = 3.80
3.58
46a
2x5ø 16 L = 3.90
3.69
48
4ø 14 L = 4.10
3.89
48a
1ø 14 L = 4.05
3.85
50
5ø 14 Lmediu = 4.20
Variabil 3.87–4.33
23a
6 ø 16 L = 2.35
1.24
90
69
37
64
16
116 ø 14 L = 1.45
64
16a
80 ø 14 L = 1.50
1.28

SECTIUNEA F–F SECTION (AMPRENTA ELEVATIEI PE FUNDATIE)


11.88
16
16
16a

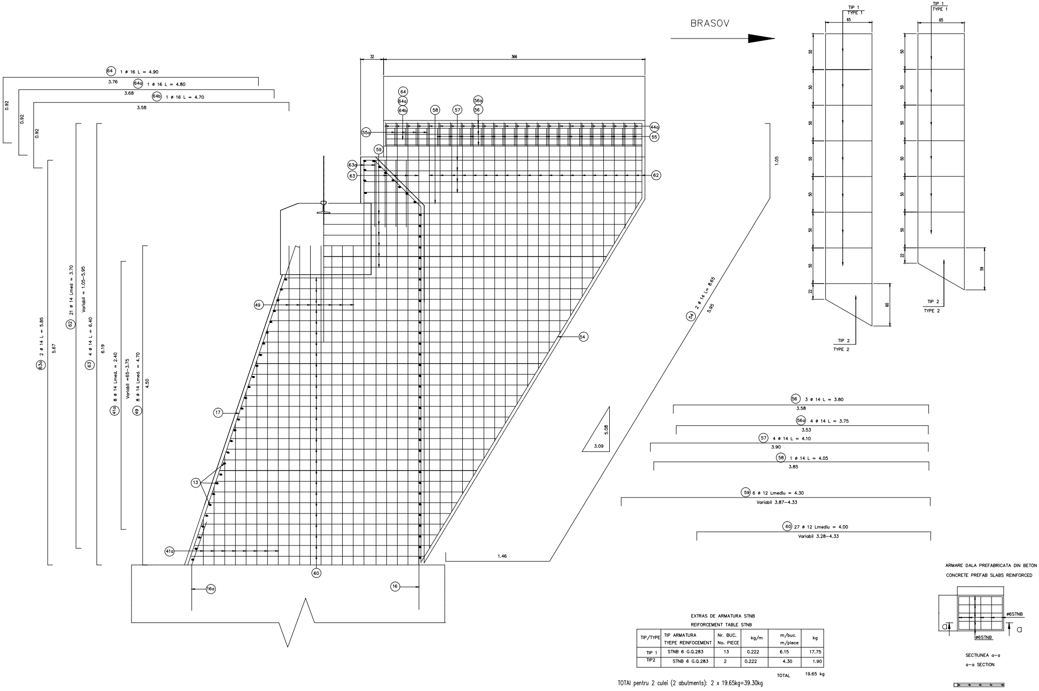
SECTIUNE J–J SECTION


366
(45)
(45a)
(46)
(48)
(48a)
(21a)
(51)
(52)
(54)
(23a)
(24)
(50)
Bearing axis
Axa de rezemare
(40)
(17)
(13)
(41)
(61)
(16)
(16a)
113
65
100
407
(52) 3 ø 14 L = 6.25
6.05
(51) 20 ø 14 Lmediu = 3.65
Variabil 1.06–5.82
18
3.35
20
2.90
87
70
15
94
1.00
20
25
32
19
72
(21a) 7 ø 12 L = 1.90
20
15
Variabil 40–90
29
(55a) 3 ø 12 Lmediu = 1.50
20
15
1.10
29
25
18
19
20
16
4
18
17
(55) 18 ø 12 L = 2.95
L
L
(45)
(45a)
(46a)
(21a)
(46)
(64a)
(55)
(55a)
(64)
(64b)
(56a)
(44a)
(56)
(47)
(48)
(64b)
(57)
(53) (52) (51)
(50)
(61)
(60)
20
26
25
66
65
10
(44a) 23 ø 12 L = 1.60

DALE PREFABRICATE DIN BETON

CONCRETE PREFAB SLABS

VEDERE G–G VIEW


BRASOV
64 1 ø 16 L = 4.90
3.76
64a 1 ø 16 L = 4.80
3.68
64b 1 ø 16 L = 4.70
3.58
0.92
0.92
0.92
63a 2 ø 14 L = 5.85
5.67
62 21 ø 14 Lmed = 3.70
Variabil = 1.05–5.95
63 4 ø 14 L = 6.40
6.19
41a 8 ø 14 Lmed. = 2.40
Variabil =65–3.75
49 8 ø 14 Lmed. = 4.70
4.50
32
366
64
64a
64b
58
57
56a
56
55a
44a
55
59
63a
63
62
49
17
13
41a
60
16a
16
54
1.05
54 2 ø 14 L= 8.65
5.95
1.46
5.08
3.09
56 3 ø 14 L = 3.80
3.58
56a 4 ø 14 L = 3.75
3.53
57 4 ø 14 L = 4.10
3.90
58 1 ø 14 L = 4.05
3.85
59 6 ø 12 Lmediu = 4.30
Variabil 3.87–4.33
60 27 ø 12 Lmediu = 4.00
Variabil 3.28–4.33
TIP 1
TYPE 1
65
50
22
60
59
TIP 2
TYPE 2
ARMARE DALA PREFABRICATA DIN BETON
CONCRETE PREFAB SLABS REINFORCED
ø6STNB
a
SECTIUNEA a–a
a–a SECTION

EXTRAS DE ARMATURA STNB

REIFORCEMENT TABLE STNB

TIP/TYPE	TIP ARMATURA TYEPE REINFOCEMENT	Nr. BUC. No. PIECE	kg/m	m/buc. m/piece	kg
TIP 1	STNB 6 G.Q.283	13	0.222	6.15	17.75
TIP2	STNB 6 G.Q.283	2	0.222	4.30	1.90

TOTAL 19.65 kg

TOTAl pentru 2 culei (2 abutments): 2 x 19.65kg=39.30kg

EXTRAS DE ARMARE

REINFORCEMENT TABLE

Marca	Diametrul	Numar bucati asemenea	Lungimea/ bucata	Lungimi/diametre PC52				
				S355			S345	
				ø10mm	ø12mm	ø14mm	ø16mm	ø20mm
1	10	74	3.70	273.80				
1a	10	2	3.40	6.80				
1b	10	2	2.75	5.50				
1c	10	2	2.25	4.50				
2	10	95	4.90	465.50				
2a	10	5	3.50	17.50				
2b	10	5	1.30	6.50				
2c	10	5	2.50	12.50				
3	12	78	1.00		78.00			
4	10	78	1.25	97.50				
5	10	78	1.20	93.6				
6	10	8	1.80	14.40				
7	20	5	9.40					47.00
7a	20	5	3.75					18.75
8	14	20	4.60			92.00		
8a	14	20	8.35			167.00		
9	12	24	9.50		228.00			
9a	12	24	4.40		105.60			
10	10	176	1.10	193.60				
11	10	8	1.70	13.60				
12	10	8	2.15	17.20				
13	12	78	4.45		347.10			
13a	12	78	7.90		616.20			
14	12	75	2.55		191.25			
14a	12	1	2.35		2.35			
14b	12	1	2.05		2.05			
14c	12	1	2.40		2.40			
14d	12	1	2.15		2.15			
15	12	90	4.35		391.50			
16	16	116	1.45				168.20	
16a	16	80	1.50				120.00	
17	12	90	4.70		423.00			
17a	12	6	2.30		13.8			
18	16	2	3.45				6.90	
18a	16	2	3.40				6.80	
19	14	2	3.45			6.90		
19a	14	2	3.40			6.80		
20	14	3	4.65			13.95		
21	12	23	1.90		43.70			
21a	12	7	1.90		13.30			
22	10	28	2.45	61.80				
23	16	12	5.15				38.70	
23a	16	6	2.35				41.10	
24	10	6	2.25	13.50				
25	14	5	5.50			27.50		
26	14	1	4.05			4.05		
27	14	6	4.30			25.80		
28	14	30	2.90			87.00		
29	14	23	5.15			118.45		
30	14	2	5.85			11.70		
30a	14	3	5.70			17.10		
31	14	2	8.45			16.90		
31a	14	2	8.35			16.70		
31b	14	2	8.55			17.10		
32	16	1	4.05				4.05	
32a	16	1	4.00				4.00	
32b	16	1	3.90				3.90	
33	14	3	3.50			10.50		
33a	14	4	3.65			14.60		
34	14	5	4.00			28.50		
35	14	1	4.00			4.00		
36	14	6	4.10			24.60		
37	14	26	4.00			104.00		
38	14	23	3.45			73.95		
39	14	2	5.70			11.40		
39a	14	2	5.70			11.40		
40	14	8	4.80			38.40		
41	14	8	2.25			18.00		
41a	14	8	2.40			19.20		
42	10	80	0.95	76.00				
43	12	20	2.75		55.00			
43a	12	3	1.45		4.35			
44	12	23	1.60		36.80			
44a	12	23	1.60		36.80			
45	16	2	3.80				7.60	
45a	16	2	3.85				7.70	
46	14	10	3.80			38.00		
46a	14	10	3.90			39.00		
48	14	4	4.10			16.40		
49	14	8	4.70			37.6		
50	14	5	4.20			21.00		
51	14	20	3.65			73.00		
52	14	3	6.25			18.75		
54	14	2	8.65			17.30		
55	12	18	2.95		53.10			
55a	12	3	1.50		4.50			
56	14	3	3.80			11.40		
56a	14	4	3.75			15.00		
57	14	4	4.10			16.10		
58	14	1	4.05			4.05		
59	12	6	4.30		25.80			
60	12	27	4.00		108.00			
61	14	27	4.00			108.00		
62	14	21	3.70			77.70		
63	14	4	6.40			25.6		
63a	14	2	5.85			11.70		
64	16	1	4.90				4.90	
64a	16	1	4.80				4.80	
64b	16	1	4.70				4.70	
Lungimea / diametre (m)				1373.80	2784.80	1517.80	423.35	65.75
Greutatea/m (kg/m)				0.617	0.888	1.208	1.578	2.466
Greutatea/diametre (kg)				847.70	2473.00	1833.50	668.00	162.15
Greutatea totala (kg)				5984.35				
Greutatea rotunjita (kg)				5990.00				

Greutatea rotunjita pentru 2 culei (kg) =11980

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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.

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 EURO
EUROPEAN UNION FINANCED PR

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

CLIENT / CLIENT

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

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A.Stanciu - Dinulescu	02.2012	
Întocmit Elaborated	Proiectant Designer	Ioan Rentea	02.2012	

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

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

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

Denumire desen / Drawing Title :

POD/BRIDGE Km.247+717.752 L=15.00m

PLAN ARMARE CULEEA BRASOV
BRASOV ABUTMENTS REINFORCEMENT

Codificare / Codification System	Scara / Scale 1:20	LOT / LOT	Nr. / No 01 / 01

E	A	5	1		0	1		E		1	4		B	C		P	V		0	2		7		2		0	0	8		0

594 X 5950