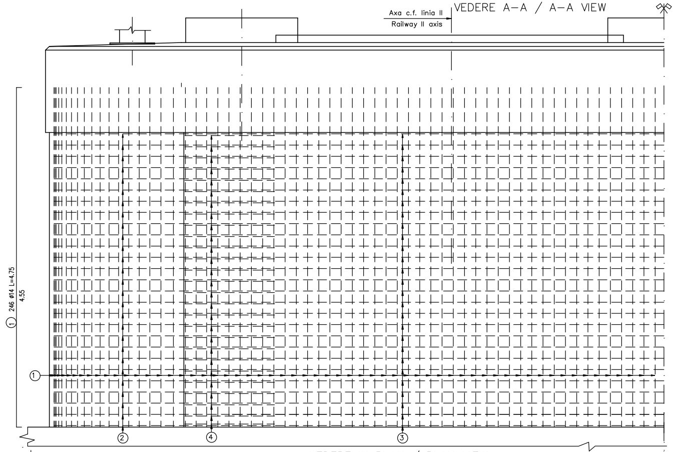
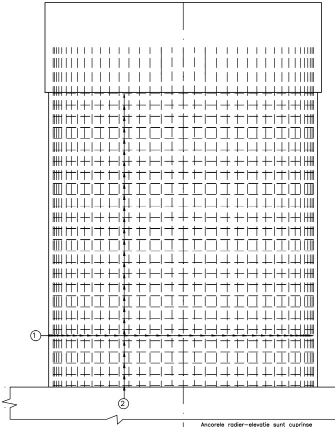
VEDERE A–A / A–A VIEW

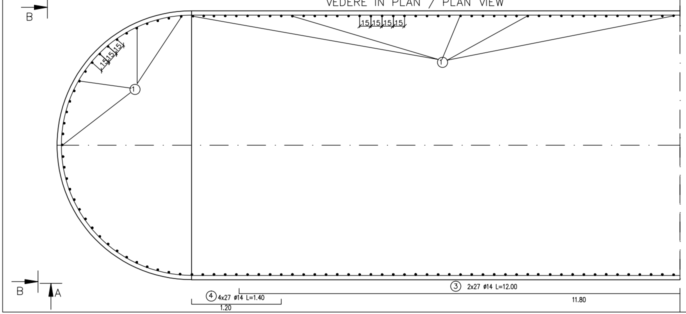

Axa c.f. linia II
Railway II axis
① 246 ø14 L=4.75
4.55
①
②
④
③

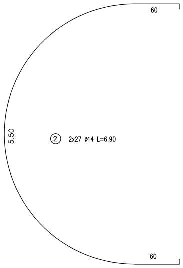
VEDERE B–B / B–B VIEW



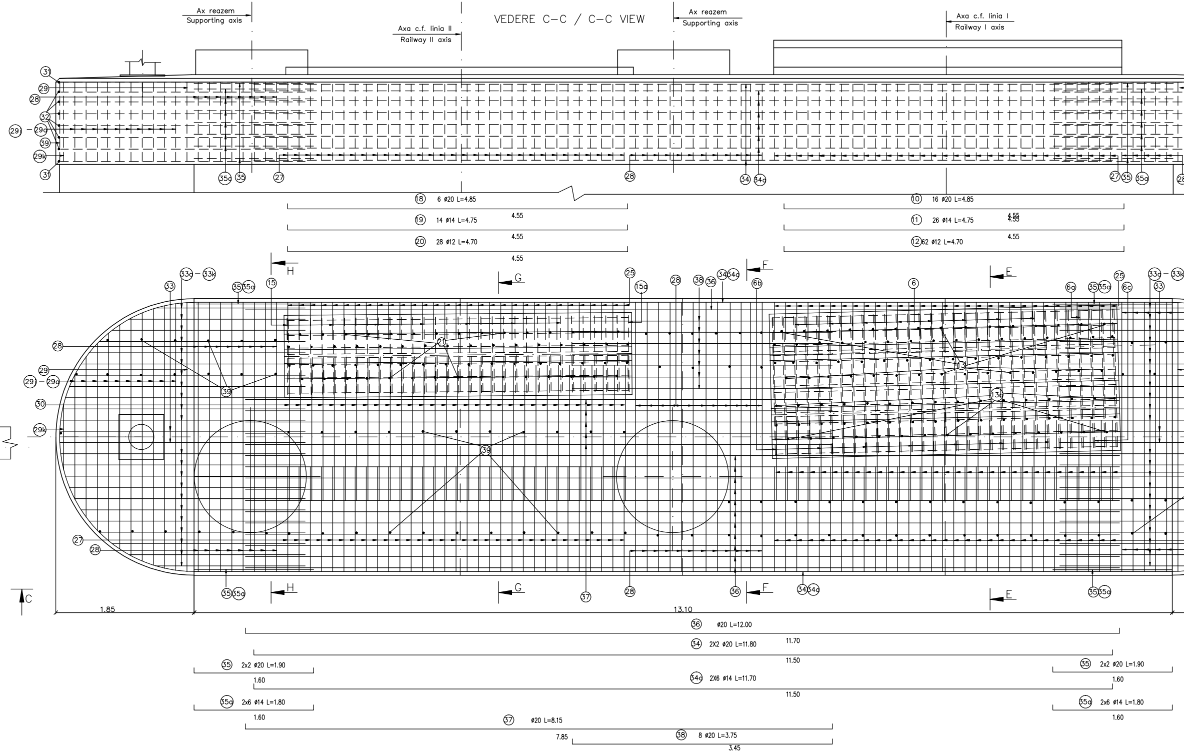
Ancorele radier–elevatie sunt cuprinse in planul de armare al radierului

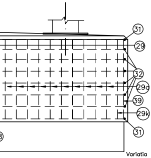
VEDERE IN PLAN / PLAN VIEW


B
B
A
A
15 15 15 15
15 15 15
①
①
③ 2x27 ø14 L=12.00
11.80
④ 4x27 ø14 L=1.40
1.20

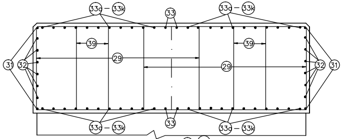

60
5.50
② 2x27 ø14 L=6.90
60

VEDERE C–C / C–C VIEW


Ax reazem
Supporting axis
Axa c.f. linia II
Railway II axis
Ax reazem
Supporting axis
Axa c.f. linia I
Railway I axis
31
29
28
32
29i – 29a
39
29k
31
35a
35
27
28
34
34a
27
35
35a
28
18 6 ø20 L=4.85
4.55
19 14 ø14 L=4.75
4.55
20 28 ø12 L=4.70
4.55
10 16 ø20 L=4.85
4.55
11 26 ø14 L=4.75
4.55
12 62 ø12 L=4.70
4.55
H
G
F
E
33a – 33k
33
35 35a
15
25
15a
28
38
36
34 34a
6b
6
6a
35 35a
25
6c
33a – 33k
33
28
29
29i – 29a
30
29k
39
21
39
13
13a
27
28
C
35 35a
H
G
37
28
36
F
34 34a
E
35 35a
1.85
13.10
36 ø20 L=12.00
11.70
34 2X2 ø20 L=11.80
11.50
35 2x2 ø20 L=1.90
1.60
34a 2X6 ø14 L=11.70
11.50
35 2x2 ø20 L=1.90
1.60
35a 2x6 ø14 L=1.80
1.60
35a 2x6 ø14 L=1.80
1.60
37 ø20 L=8.15
7.85
38 8 ø20 L=3.75
3.45


31
29
32
29a – 29j
39
29k
31

SECTIUNE D–D / D–D SECTION

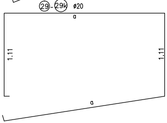

33a – 33k
33
33a – 33k
39
39
29
29
31
32
32
31
33a – 33k
33
33a – 33k

Variatia lungimilor pentru marca (29) ÷ (29k) ø20

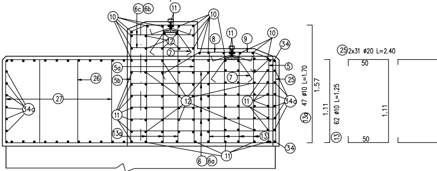
Marca	29	29a	29b	29c	29d	29e	29f	29g	29h	29i	29j	29k
buc.	4	4	4	4	4	4	4	4	4	4	4	2
a	2.17	2.16	2.13	2.10	2.04	1.97	1.88	1.78	1.64	1.47	1.24	1.03
L	6.85	6.85	6.80	6.70	6.60	6.45	6.25	6.05	5.80	5.45	5.00	4.60

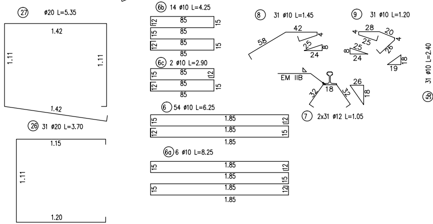
Variatia lungimilor pentru marca (33) ÷ (33k) ø20

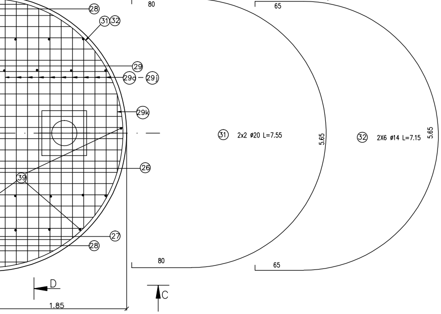
Marca	33	33a	33b	33c	33d	33e	33f	33g	33h	33i	33j	33k
buc.	4	4	4	4	4	4	4	4	4	4	4	4
a	3.30	3.29	3.27	3.23	3.18	3.11	3.02	2.90	2.78	2.61	2.38	2.02
L	3.60	3.60	3.55	3.50	3.45	3.40	3.30	3.20	3.10	2.90	2.70	2.30


29 – 29k ø20
a
1.11
1.11
a

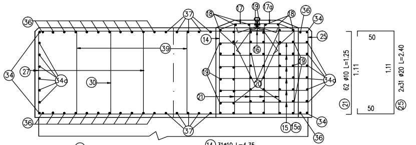
SECTIUNE E–E / E–E SECTION

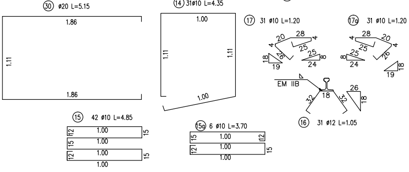

10
6c 6b
11
10
11
9
10
12
8
34
7
5a
26
5
5b
7
25
27
34a
12
11
34a
47 ø10 L=1.70
1.57
13a
11
62 ø10 L=1.25
13
1.11
13a
13
6 6a
11
34
25 2x31 ø20 L=2.40
50
1.11
50


27 ø20 L=5.35
1.42
1.11
1.11
1.42
26 31 ø20 L=3.70
1.15
1.11
1.20
6b 14 ø10 L=4.25
12 85 15
15 85
12 85 15
85
6c 2 ø10 L=2.90
15 85 12
12 85 15
85
6 54 ø10 L=6.25
15 1.85 12
12 1.85 15
1.85
6a 6 ø10 L=8.25
15 1.85 12
1.85 15 12
15 1.85 12
1.85
8 31 ø10 L=1.45
58
42
4
25
8
24
9 31 ø10 L=1.20
28
20
4
25
4
8
25
24
26
18
19
EM IIB
18
32
32
26
18
7 2x31 ø12 L=1.05
5b 31 ø10 L=2.40


80
65
28
31 32
29
29a – 29j
29k
26
39
27
28
31 2x2 ø20 L=7.55
5.65
32 2X6 ø14 L=7.15
5.65
80
65
D
1.85
C

SECTIUNE G–G / G–G SECTION


17
19
17a
36
37
18
18
34
14
16
25
36
39
19
34
27
34a
30
34a
20
21
62 ø10 L=1.25
1.11
50
1.11
2x31 ø20 L=2.40
21
25
50
36
37
15 15a
34
36

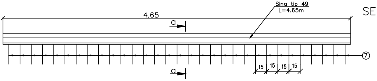

30 ø20 L=5.15
1.86
1.11
1.86
14 31ø10 L=4.35
1.00
1.11
1.11
1.00
17 31 ø10 L=1.20
28
20
4
25
25
8
24
18
26
19
17a 31 ø10 L=1.20
28
20
4
25
25
8
24
26
18
19
EM IIB
18
32
32
26
18
16 31 ø12 L=1.05
15 42 ø10 L=4.85
12 1.00 15
15 1.00
12 1.00 15
1.00
15a 6 ø10 L=3.70
15 1.00 12
12 1.00 15
1.00

Variatia lungim

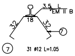
Marca	22
buc.	4
a	1.
L	1.

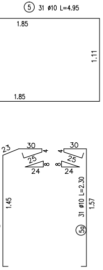
(22) pla
L=23.80m/

DISPUNEREA ANCORELOR PE SINA DE REZEMARE

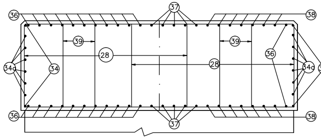

Sina tip 49
L=4.65m
4.65
a
7
a
15
15
15
15

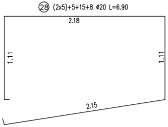
SECTIUNE a–a


3.5 L
EM II B
18
32
32
7
7 31 ø12 L=1.05

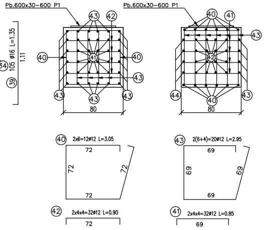

⑤ 31 ø10 L=4.95
1.85
1.11
1.85
23
30
4
25
8
24
30
4
25
8
24
1.45
31 ø10 L=2.30
1.57
5a

SECTIUNE F–F / F–F SECTION


36
37
38
39
28
39
36
34a
34
28
34a
34
1.11
105 ø16 L=1.35
39
36
37
38


28 (2x5)+5+15+8 ø20 L=6.90
2.18
1.11
1.11
2.15

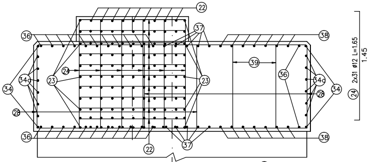
DETALIU DE CUZINET PENTRU PRESE

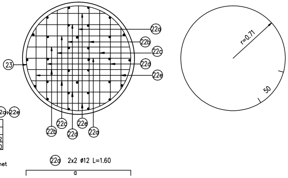

Pb.600x30–600 P1
43
42
Pb.600x30–600 P1
40
41
43
40
41
40
42
43
43
43
43
44
40
43
80
80
40 2x6=12ø12 L=3.05
72
72
72
72
43 2(6+4)=20ø12 L=2.95
69
69
69
69
42 2x4x4=32ø12 L=0.90
72
41 2x4x4=32ø12 L=0.85
69

PLACUTE PENTRU PRESA

Poz. Piece	Denumirea materialului	Buc.	Sectiune Section	Lung. Long. (mm)	Sectiune/Section kg/ml	Sectiune/Section kg/buc	Sectiune/Section kg
P1	Placuta/Plate	2	600x30	600	141.30	84.78	170
P2	Placuta/Plate	2	600x20	600	94.20	56.52	113
					Total partial		283
					Sudura 5% Welding 5%		7
					TOTAL kg		290

SECTIUNE H–H / H–H SECTION


22
36
37
38
34a
39
36
34a
34
23
24
23
34
28
28
36
22
37
38
2x31 ø12 L=1.65
24
1.45


22a
22b
22c
23
22d
22e
22b
22c
22e
22d
22a
23 2x10 ø12 L=5.15
r=0.71
50
22a 2x2 ø12 L=1.60
a

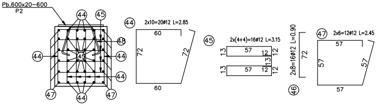
milor pentru marca 22a÷22e

2a	22b	22c	22d	22e
	8	8	8	8
40	1.37	1.26	1.07	0.72
60	1.55	1.45	1.25	0.90

sa 2x10 ø12

/1rand plasa pt.1cuzinet

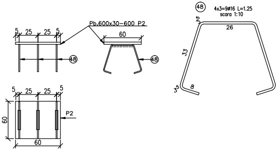
DETALIU DE CUZINET PENTRU STALPUL DE ELECTRIFICARE


Pb.600x20–600
P2
44
45
48
44
45
44
44
47
44
47
44 2x10=20ø12 L=2.85
60
72
72
60
45 2x(4+4)=16ø12 L=3.15
13
57
12
12
13
13
57
12
2x8=16ø12 L=0.90
72
46
47 2x6=12ø12 L=2.45
57
57
57
57

D E T A L I U L "a"

Placuta pentru presa si pentru stalpul de electrificare

scara 1:25


5 25 25 5
48
Pb.600x30–600 P2
60
48
48 4x3=9ø16 L=1.25
scara 1:10
26
33
8
5 25 25 5
P2
60
60

EXTRAS DE ARMATURA PENTRU PILA
MEASURING OF THE PIER REINFORCEMENT

Marca	◻	Nr.buc.	Lung./buc	S355 ◻10	S355 ◻12	S355 ◻14	S345 ◻16	S345 ◻20
1	14	246	4,75			1168,50		
2	14	54	6,9			372,60		
3	14	54	12			648,00		
4	14	108	1,40			151,20		
5	10	31	4,95	153,45				
5a	10	31	2,30	71,30				
5b	10	31	2,4	74,40				
6	10	54	6,25	337,50				
6a	10	6	8,25	49,50				
6b	10	14	4,25	59,50				
6c	10	2	2,9	5,80				
7	12	62	1,05		65,10			
8	10	31	1,45	44,95				
9	10	31	1,25	38,75				
10	20	16	4,85					77,60
11	14	26	4,75			123,50		
12	12	62	4,70		291,40			
13	10	62	1,25	77,50				
13a	10	47	1,70	79,90				
14	10	31	4,35	134,85				
15	10	42	4,85	203,70				
15a	10	6	3,7	22,20				
16	12	31	1,05		32,55			
17	10	31	1,20	37,20				
17a	10	31	1,20	37,20				
18	20	6	4,85					29,10
19	14	14	4,75			66,50		
20	12	28	4,70		131,60			
21	10	62	1,25	77,50				
22	12	20	23,80	476,00				
23	12	20	5,15	103,00				
24	12	46	4,65	213,90				
25	20	62	2,40					148,80
26	20	31	3,70					114,70
27	20	31	5,35					165,85
28	20	50	6,90					345,00
29	20	4	6,85					27,40
29a	20	4	6,85					27,40
29b	20	4	6,80					27,20
29c	20	4	6,70					26,80
29d	20	4	6,60					26,40
29e	20	4	6,45					25,80
29f	20	4	6,25					25,00
29g	20	4	6,05					24,20
29h	20	4	5,80					23,20
29i	20	4	5,45					21,80
29j	20	4	5,00					20,00
29k	20	2	4,60					9,20
30	20	31	5,15					159,65
31	20	4	7,55					30,20
32	14	12	7,15			85,80		
33	20	8	3,60					28,80
33a	20	8	3,60					28,80
33b	20	8	3,55					28,40
33c	20	8	3,50					28,00
33d	20	8	3,45					27,60
33e	20	8	3,40					27,20
33f	20	8	3,30					26,40
33g	20	8	3,20					25,60
33h	20	8	3,10					24,80
33i	20	8	2,90					23,20
33j	20	8	2,70					21,60
33k	20	8	2,30					18,40
34	20	4	11,80					47,20
34a	14	12	11,70			140,40		
35	20	4	1,90					7,60
35a	14	12	1,80			21,60		
36	20	24	12,00					288,00
37	20	10	8,15					81,50
38	20	16	3,75					60,00
39	16	105	1,25				131,25	
40	12	12	3,05		36,60			
41	12	32	0,85		27,20			
42	12	32	0,90		28,80			
43	12	20	2,95		59,00			
44	12	20	2,85		57,00			
45	12	16	3,15		50,40			
46	12	16	0,90		14,40			
47	12	12	2,45		29,40			
48	16	9	1,25				11,25	
LUNGIMI/ ◻(m)				2298,10	823,45	2778,10	142,50	2148,40
GREUTATI/ML (kg)				0,617	0,888	1,208	1,578	2,465
GREUTATI/ ◻				1418	732	3356	225	5296
GREUTATI PE TIP DE OTEL (kg)				5506			5521	
PIERDERI 5% (kg)				553				
GREUTATE TOTALA PILA (kg)				11580				

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–ø28)
Strat de acoperire/concrete cover	– min. 4cm expunere in aer/air exposed

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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 EURO
EUROPEAN UNION FINANCED PR

CLIENT / CLIENT

CFR

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	03.2012	
Aprobat Approved	Coordonator Secţiune 1 Section 1 Coordinator	C. Gambelli	03.2012	
Verificat Checked	Expert Cheie Checking Expert	V.Kallidromitis	03.2012	VK

SUBCONTRACTANT / SUBCONTRACTOR

AREX Lider COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A. Dinulescu Stanciu	03.2012	
Întocmit Elaborated	Proiectant Designer	Mihai Ady-Nicolae	03.2012	

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:
P.Th. / T.D.

Denumire desen / Drawing Title :

STATIA / STATION: RACOS
VIADUCT km 220+762,028 - G.Z.C.J.C.B.+G.I.B. L=292,30m
ARMAREA PILEI 5 / PIER 5 REINFORCEMENT

Codificare / Codification System	Scara / Scale 1:25	LOT / LOT	Nr. / No 01 / 01

EA51 01 E 11 BC PV 02 1 2 028 0