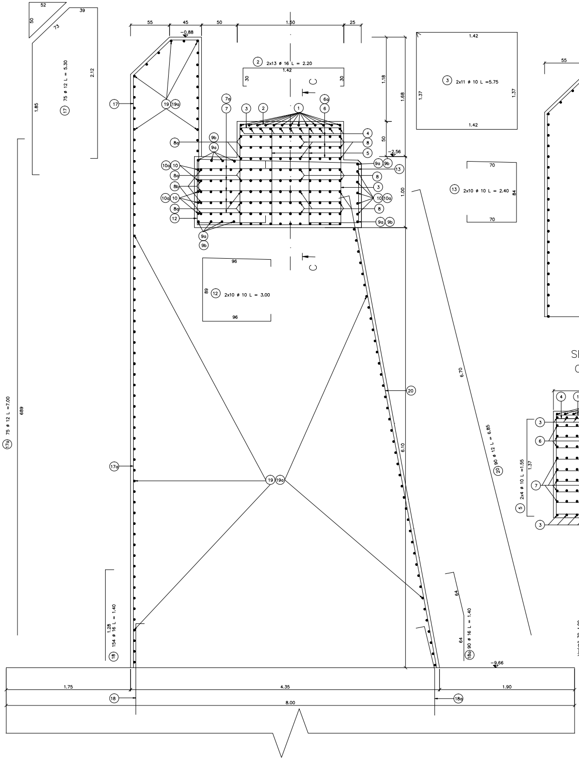
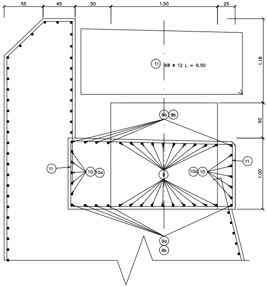
PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

SECTIUNEA A–A
A–A SECTION



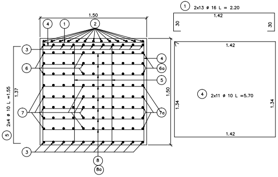
52
50
73
39
2.12
1.85
⑰ 75 ø 12 L = 5.30
⑰a 75 ø 12 L = 7.00
689
55
45
50
1.50
25
-0.88
② 2x13 ø 16 L = 2.20
1.42
30
30
1.18
1.68
50
-2.56
1.00
C
③ 2x11 ø 10 L =5.75
1.42
1.37
⑬ 2x10 ø 10 L = 2.40
70
84
⑫ 2x10 ø 10 L = 3.00
96
89
6.70
6.10
⑳ 90 ø 12 L = 6.85
⑱ 154 ø 16 L = 1.40
1.28
⑱a 90 ø 16 L = 1.40
64
-9.66
1.75
4.35
1.90
8.00
1
2
3
4
5
6
6a
7
7a
8
8a
8b
9a
9b
10
10a
12
13
17
17a
18
18a
19
19a
20

SECTIUNEA B–B
B–B SECTION



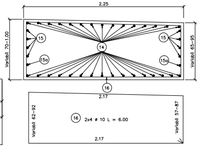
55
45
50
1.50
25
⑪ 68 ø 12 L = 6.50
1.18
50
1.00
9a
9b
10
10a
11
9

SECTIUNEA C–C
C–C SECTION

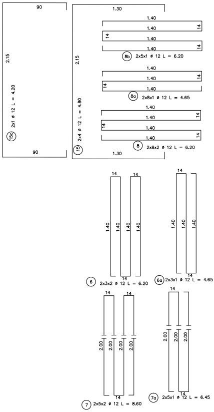


1.50
① 2x13 ø 16 L = 2.20
1.42
30
30
⑤ 2x4 ø 10 L =1.55
1.37
1.50
④ 2x11 ø 10 L =5.70
1.42
1.34
1
2
3
4
5
6
6a
7
7a
8
8a

SECTIUNEA D–D
D–D SECTION

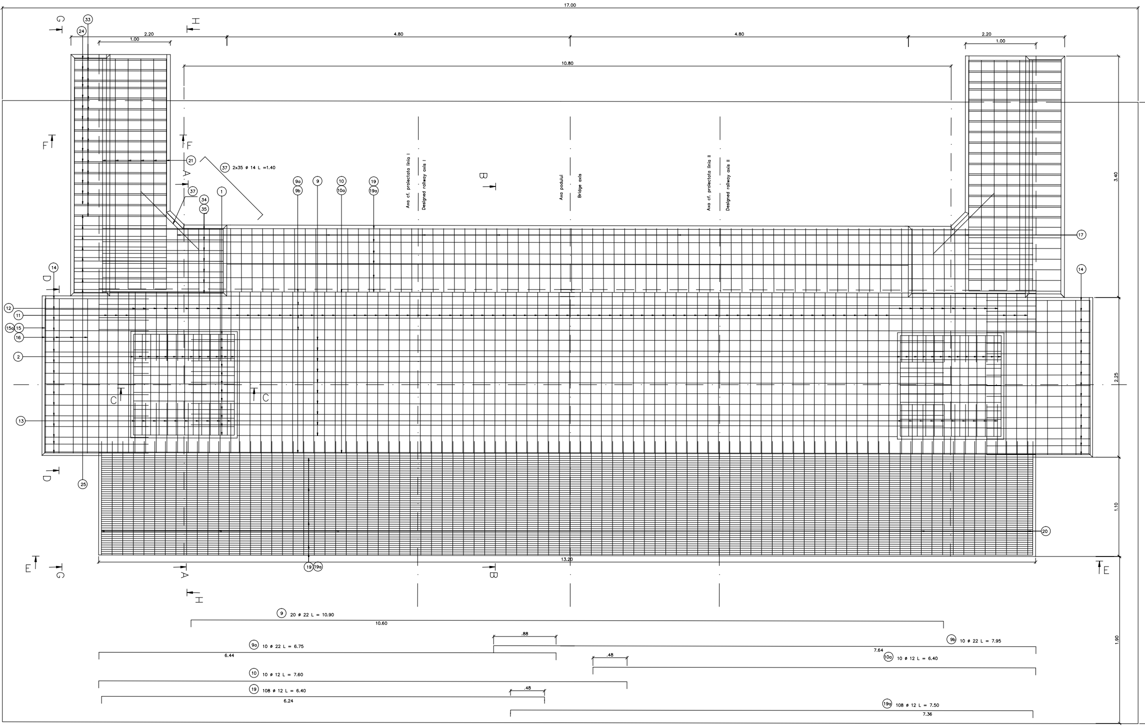


2.25
Variabil 70–1.00
Variabil 65–95
14
15
15a
16
2.17
⑯ 2x4 ø 10 L = 6.00
Variabil 62–92
Variabil 57–87



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

VEDERE IN PLAN
PLAN VIEW


17.00
2.20
1.00
4.80
4.80
2.20
1.00
10.80
G
H
33
24
F
F
21
37 2x35 ø 14 L =1.40
A
37
34
35
1
9a
9b
9
10
10a
19
19a
Axa cf. proiectata linia I
Designed railway axis I
B
Axa podului
Bridge axis
Axa cf. proiectata linia II
Designed railway axis II
17
14
14
D
12
11
15a
15
16
2
C
C
13
D
25
3.40
2.25
8.00
1.10
1.90
20
13.20
E
G
A
19
19a
B
E
H
9 20 ø 22 L = 10.90
10.60
.88
9a 10 ø 22 L = 6.75
6.44
9b 10 ø 22 L = 7.95
7.64
.48
10a 10 ø 12 L = 6.40
10 10 ø 12 L = 7.60
19 108 ø 12 L = 6.40
.48
6.24
19a 108 ø 12 L = 7.50
7.36

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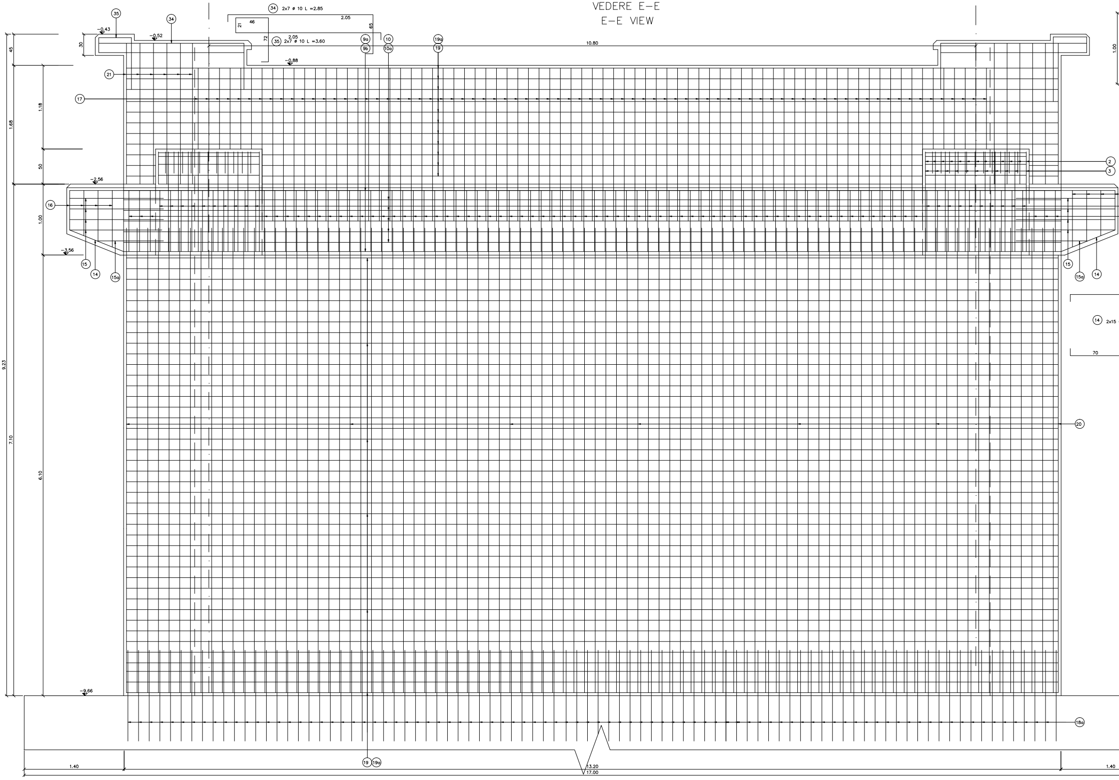
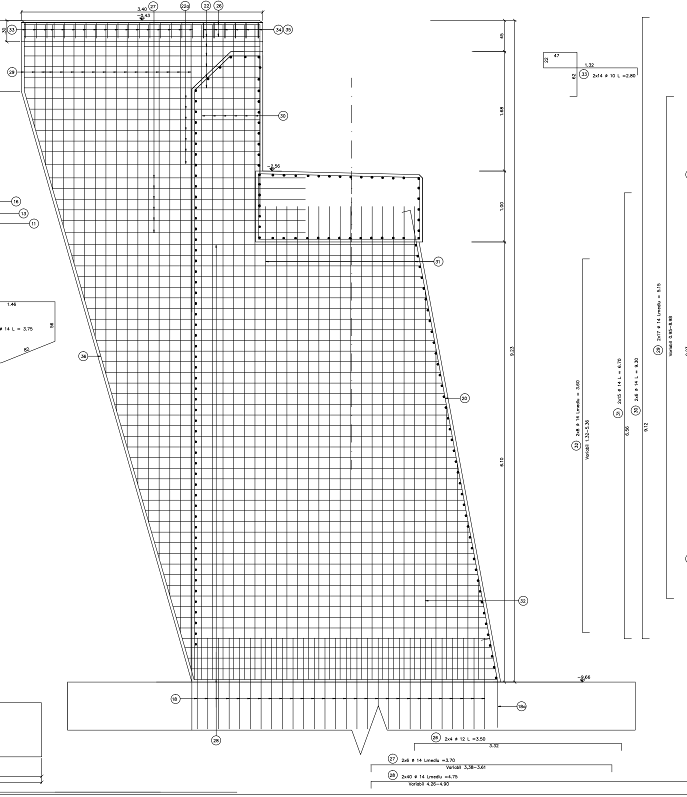
VEDERE E–E
E–E VIEW

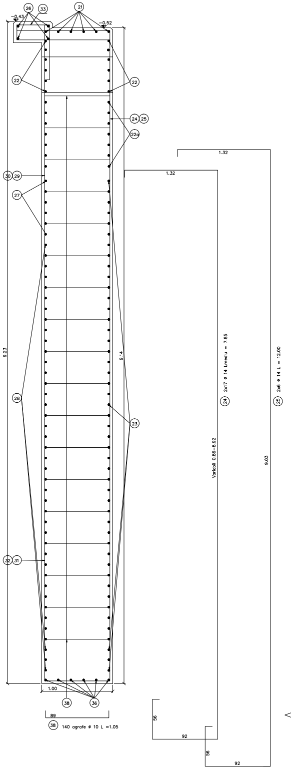

34
2x7 ø 10 L =2.85
2.05
46
21
65
72
2.05
35
2x7 ø 10 L =3.60
35
34
−0.43
−0.52
−0.88
30
45
9a
9b
10
10a
19a
19
10.80
1.00
21
17
1.18
1.68
50
2
3
−2.56
16
1.00
−3.56
15
14
15a
15
15a
14
14
2x15
70
9.23
7.10
6.10
20
−9.66
18a
19
19a
1.40
13.20
17.00
1.40

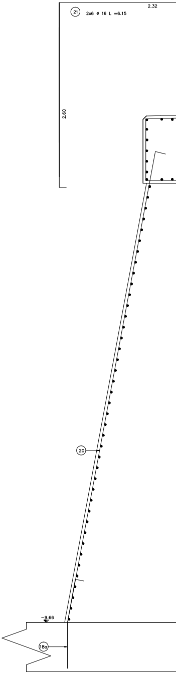
PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

VEDERE G-G
G-G VIEW

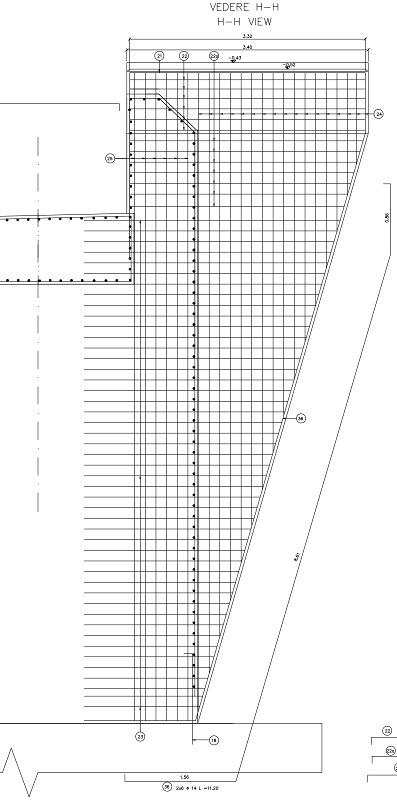

3.40
−0.43
27
22a
22
26
33
34
35
30
29
30
−2.56
16
13
11
31
1.46
56
ø 14 L = 3.75
82
36
20
32
45
1.68
1.00
9.23
6.10
−9.66
18
18a
28
22
47
1.32
62
33
2x14 ø 10 L =2.80
32
2x8 ø 14 Lmediu = 3.60
Variabil 1.32–5.36
31
2x15 ø 14 L = 6.70
6.56
30
2x6 ø 14 L = 9.30
9.12
29
2x17 ø 14 Lmediu = 5.15
Variabil 0.95–8.98
26
2x4 ø 12 L =3.50
3.32
27
2x6 ø 14 Lmediu =3.70
Variabil 3,38–3.61
28
2x40 ø 14 Lmediu =4.75
Variabil 4.26–4.90

SECTIUNEA F-F
F-F SECTION


26
33
21
−0.43
−0.52
22
22
24
25
22a
30
29
27
28
23
32
31
9.23
9.14
1.00
38
36
89
38
140 agrafe ø 10 L =1.05
1.32
1.32
24
2x17 ø 14 Lmediu = 7.85
Variabil 0.86–8.92
56
92
25
2x6 ø 14 L = 12.00
9.03
56
92


21
2x6 ø 16 L =6.15
2.32
2.60
20
−9.66
18a

VEDERE H–H
H–H VIEW


3.32
3.40
21
22
22a
-0.43
-0.52
24
25
0.86
36
8.61
23
18
1.56
36 2x6 ø 14 L =11.20

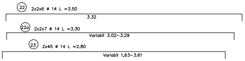
EXTRAS DE ARMARE

REINFORCEMENT TABLE

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	10.90					218
9a	22	10	6.75					67.5
9b	22	10	7.95					79.5
10	12	10	7.60		76			
10a	12	10	6.40		64			
11	12	68	6.50		442			
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	75	5.30		397.5			
17a	12	75	7.00		525			
18	16	150	1.40				210	
18a	16	90	1.40				126	
19	12	112	6.40		716.8			
19a	12	112	7.50		840			
20	12	90	6.85		616.5			
21	16	12	6.15				73.8	
22	14	24	3.50			84		
22a	14	28	3.30			92.4		
23	14	94	2.80			263.2		
24	14	34	7.85			266.90		
25	14	12	12.00			144		
26	12	8	3.50		28			
27	14	12	3.70			44.4		
28	14	84	4.75			399		
29	14	34	5.15			175.10		
30	14	12	9.30			111.60		
31	14	30	6.70			201		
32	14	12	3.60			43.2		
33	10	34	2.80	95.20				
34	10	14	2.85	39.90				
35	10	14	3.60	50.4				
36	14	12	11.20			134.40		
37	14	70	1.40			98		
38	10	140	1.05	147				
Lungimea / diametre (m)				752.80	4426.2	2169.7	524.2	365
Greutatea/m (kg/m)				0.617	0.888	1.208	1.578	2.990
Greutatea/diametre (kg)				464.48	3930.47	2620.99	827.18	1091.35
Greutatea totala (kg)				8934.47				
Greutatea rotunjita (kg)				8940				

Greutatea rotunjita pentru 2 culei (kg) =17 880

NOTA Culeile Brasov si Sighisoara sunt identice.
Cotele absolute prezentate sunt pentru culeea Brasov.


22 2x2x6 ø 14 L =3.50
3.32
22a 2x2x7 ø 14 L =3.30
Variabil 3.02–3.29
23 2x45 ø 14 L =2.80
Variabil 1,63–3.61

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 EUROPEANĂ
EUROPEAN UNION FINANCED PROJECT

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	Semnătura 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		VK

SUBCONTRACTANT / SUBCONTRACTOR

AREX 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 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 (VIADUCT)/BRIDGE (VIADUCT) km 201+571.96 L=5X45.00m

PLAN ARMARE CULEI
ABUTMENTS REINFORCEMENT

Codificare / Codification System	Scara / Scale 1:20	LOT / LOT	Nr. / No 01 / 01
EA51 01 E 06 BC PV 01 5 2 010 0			

594 X 3818

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