NOTA

Numar de elemente prefabricate

-Cadre C2 :	9buc
-Aripi prefabricate A2.	2buc.
-Timpane prefabricate	2buc

NOTE

Number of precast section

-Prefabricated frames C2	9pcs.
-Prefabricated wings A2	2pcs.
-Head-wall	2pcs.

DATE HIDRAULICE:

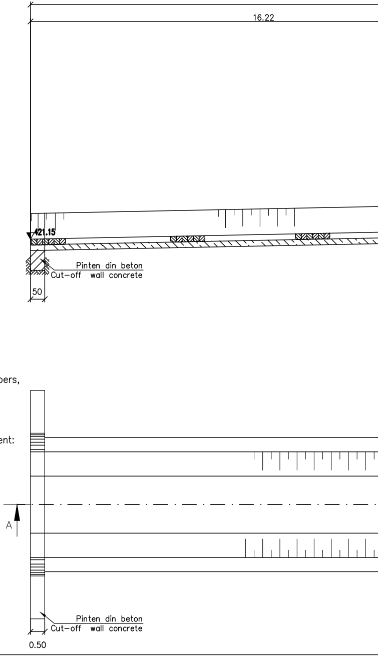
-Inaltimea de apa:	h=0,83m
-Perimetrul udat:	P=3,66m
-Aria udata:	A=1,66m²
-Viteza de curgere a apei	V=2,86m/s

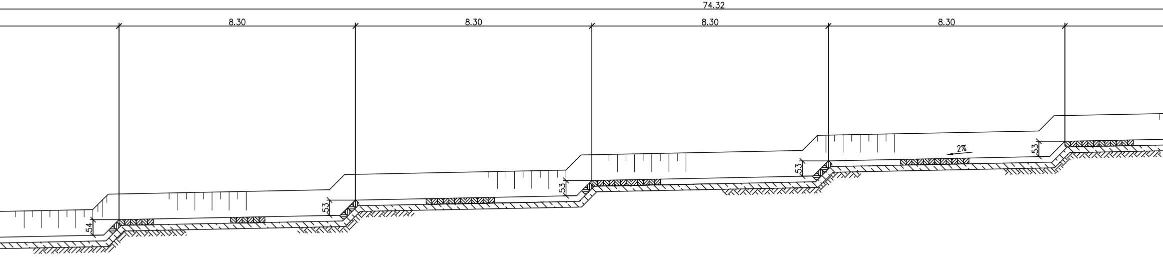
HIDRAULIC DATA:

-Hydraulic height:	h=0,83m
-Perimeter:	P=3,66m
-surface:	A=1,66m²
-Water flow speed:	V=2,86m/s

LEGENDA BETOANELOR
CONCRETE LIST

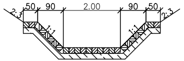
▧	-Beton în elemente prefabricate în general (cadre, aripi, timpane,): -Concrete for prefabricated elements generally (frames,wings, tympana, C 35/45 - CEM II/A - S 32,5 - (XC4+XF3+XA1)- A/C = 0,50 - Dmax22 - Cl 0,20
▧	-Beton în fundatiile podetelor, a elementelor de racordare (aripi, pinteni, camere de cadere, sferturi de con, etc), în elevatiile aripilor monolite si a camerelor de cadere, în pereu: -Concrete for the foundations of culverts, of connecting elements (wings, breakwaters, water falling chambers, cone quarters etc), for the elevations of monolith wings and of water falling chambers, in revetment: C 25/30 - CEM II/A - S 32,5 - (XF1) - A/C = 0,50 - Dmax32 - Cl 0,20
▧	-Beton în rigola drenurilor, fundatiile sferturilor de con si pentru realizarea stratului suport pentru pereu: -Concrete for the drain gutters, for the foundations of cone quarters and for the support layer of revetment: C 25/30 - CEM II/A - S 32,5 - (XC4+XF3+XA1) - A/C = 0,50 - Dmax32 - Cl 0,20
▩	-Beton în stratul de protectie a hidroizolatiei: -Concrete for the waterproofing protection layer: C 25/30 - CEM II/A - S 32,5 - (XC4+XF3) - A/C = 0,50 - Dmax16 - Cl 0,20

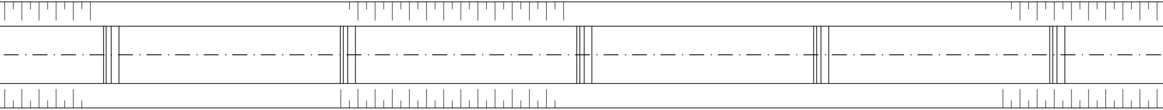

16.22
421.15
Pinten din beton
Cut-off wall concrete
50
A
Pinten din beton
Cut-off wall concrete
0.50


74.32
8.30
8.30
8.30
8.30
54
53
53
53
53
2%

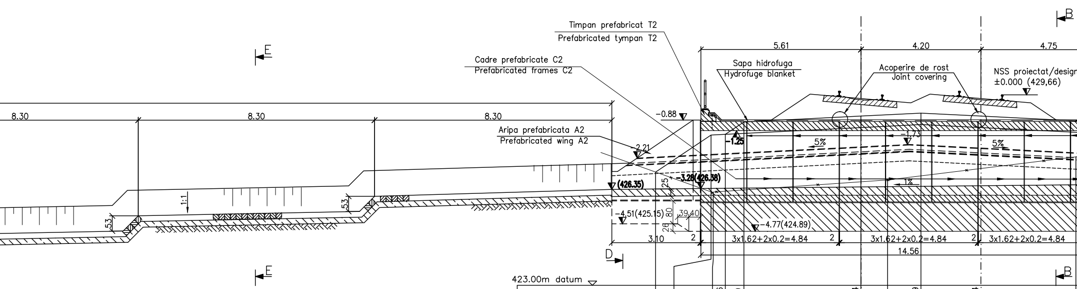
SECTIUNE E-E/ E-E SECTION

Scara 1:100


50
90
2.00
90
50
2:3
1:1
1:1
2:3

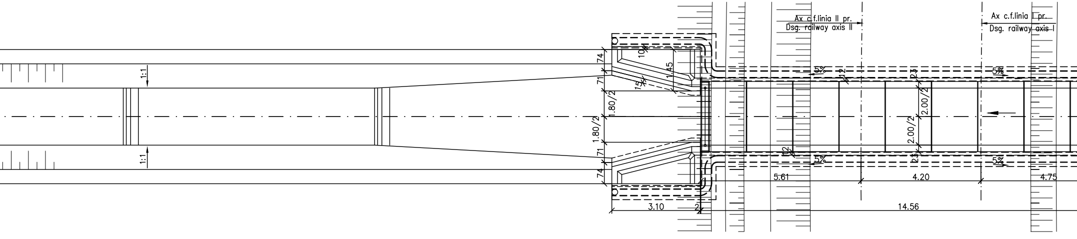


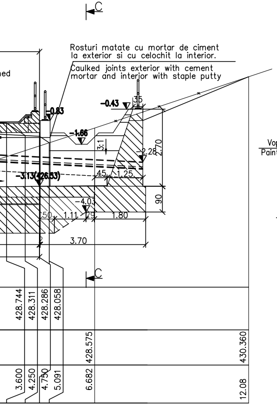
SECTIUNE LONGITUDINALA A–A/
LONGITUDINAL SECTION A–A


D
E
B
Timpan prefabricat T2
Prefabricated tympan T2
Cadre prefabricate C2
Prefabricated frames C2
Aripa prefabricata A2
Prefabricated wing A2
Sapa hidrofuga
Hydrofuge blanket
Acoperire de rost
Joint covering
NSS proiectat/design
±0.000 (429,66)
5.61
4.20
4.75
8.30
8.30
8.30
−0.88
−1.25
−1.73
−2.21
5%
5%
1%
(426.35)
−3.28(426.38)
−4.51(425.15)
−4.77(424.89)
25
53
53
1:1
80
28
39
40
3.10
2
3x1.62+2x0.2=4.84
2
3x1.62+2x0.2=4.84
2
3x1.62+2x0.2=4.84
14.56
D
E
B
423.00m datum

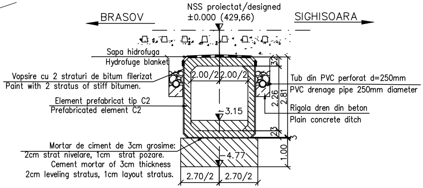
Nivelul platformei pr. Subgrade	426.966	428.261		428.286	428.719	428.924		429.029	428.924	
Nivelul terenului existent Ground			426.266				426.691			427.501
Distanta Distanta	11.395	9.452	9.377	8.952	8.303	4.203	3.269	2.101	0.000	3.329

VEDERE PLANA
PLAN VIEW

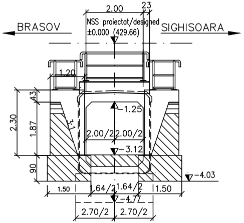

Ax c.f.linia II pr.
Dsg. railway axis II
Ax c.f.linia I pr.
Dsg. railway axis I
1:1
1:1
74
71
1.80/2
1.80/2
71
74
10%
15%
1.45
5%
5%
5%
5%
12
12
23
23
2.00/2
2.00/2
5.61
4.20
4.75
3.10
2
14.56


C
Rosturi matate cu mortar de ciment la exterior si cu celochit la interior.
Caulked joints exterior with cement mortar and interior with staple putty
ned
-0.83
-0.43
35
-1.66
3:1
-2.28
2.70
-3.13(426.53)
45
1.25
90
-4.03
50
1.11
29
1.80
3.70
C
428.744
428.311
428.286
428.058
428.575
430.360
3.600
4.250
4.750
5.091
6.682
12.08

SECTIUNE TRANSVERSALA B-B
CROSS SECTION B-B

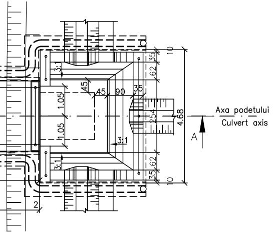

NSS proiectat/designed
±0.000 (429,66)
BRASOV
SIGHISOARA
Sapa hidrofuga
Hydrofuge blanket
Vopsire cu 2 straturi de bitum filerizat
Paint with 2 stratus of stiff bitumen.
Element prefabricat tip C2
Prefabricated element C2
Mortar de ciment de 3cm grosime:
2cm strat nivelare, 1cm strat pozare.
Cement mortar of 3cm thickness
2cm leveling stratus, 1cm layout stratus.
Tub din PVC perforat d=250mm
PVC drenage pipe 250mm diameter
Rigola dren din beton
Plain concrete ditch
2.00/2
2.00/2
32
2.26
2.81
-3.15
23
3
-4.77
1.00
2.70/2
2.70/2

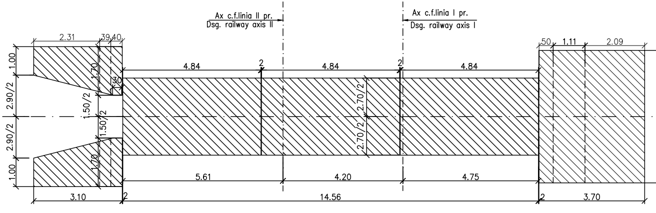
SECTIUNE C-C
C-C SECTION


2.00
23
NSS proiectat/designed
±0.000 (429.66)
BRASOV
SIGHISOARA
1.20
43
2.30
1.87
3:1
-1.25
2.00/2
2.00/2
-3.12
90
-4.03
1.50
1.64/2
1.64/2
1.50
-4.77
2.70/2
2.70/2

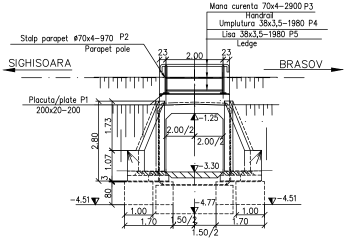
MA

PLANUL FUNDATIILOR
FUNDATION PLAN


3:1
45
45
90
35
1.05
1.05
3:1
10
35
62
2.54
4.68
62
35
10
3:1
2
Axa podetului
Culvert axis
A


Ax c.f.linia II pr.
Dsg. railway axis II
Ax c.f.linia I pr.
Dsg. railway axis I
2.31
39
40
1.00
2.90/2
2.90/2
1.00
1.70
30
1.50/2
1.50/2
1.70
4.84
2
4.84
2
4.84
2.70/2
2.70/2
5.61
4.20
4.75
3.10
2
14.56
50
1.11
2.09
2
3.70

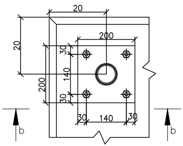
SECTIUNE D-D
D-D SECTION


Mana curenta 70x4-2900 P3
Handrail
Umplutura 38x3,5-1980 P4
Lisa 38x3,5-1980 P5
Ledge
Stalp parapet ø70x4-970 P2
Parapet pole
SIGHISOARA
BRASOV
23
2.00
23
Placuta/plate P1
200x20-200
1.73
2.80
1.07
3
80
-1.25
2.00/2
2.00/2
-3.30
-4.51
-4.77
-4.51
1.00
1.70
1,50/2
1.50/2
1.00
1.70

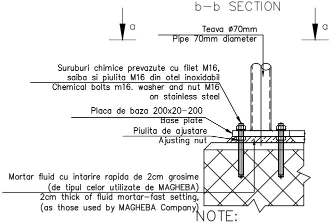
DETALIU PENTRU PRINDEREA PLACUTELOR P1 DE TIMPAN
DETAIL TO JOIN THE SLABS P1 AT THE TYMPANUM

Scara 1:5

VEDERE IN PLAN a-a
a-a PLAN VIEW


20
20
200
30
140
30
200
30
140
30
b
b

SECTUINE b-b
b-b SECTION


a
a
Teava ø70mm
Pipe 70mm diameter
Suruburi chimice prevazute cu filet M16,
saiba si piulita M16 din otel inoxidabil
Chemical bolts m16. washer and nut M16
on stainless steel
Placa de baza 200x20-200
Base plate
Piulita de ajustare
Ajusting nut
Mortar fluid cu intarire rapida de 2cm grosime
(de tipul celor utilizate de MAGHEBA)
2cm thick of fluid mortar-fast setting,
(as those used by MAGHEBA Company)

NOTA:

1. Prezentul plan s-a intocmit pe baza urmatoarelor date:
-plan de situatie
-profil in lung
-profil transversal
-fisa podului
-calcul hidraulic
-date culese pe teren
2. Podetul corespunde la convoaiele de calcul UIC (LM71 si SW/2)
3. La executie se vor respecta cu strictete prevederile din "Normativ pentru producerea betonului si executarea lucrarilor din beton, beton armat si beton precomprimat. Partea 1: Producerea betonului", indicativ NE 012/1-2007 si "Normativ pentru producerea betonului si executarea lucrarilor din beton, beton armat si beton precomprimat. Partea 2: Executarea lucrarilor din beton", indicativ NE 012/2-2010, iar verificarea calitatii lucrarilor si receptionarea lor se va face conform normativului C56-1985.
4. Daca la executie se vor constata neconcordante intre situatia existenta pe teren si cea din proiect se va anunta proiectantul.
5. Constructia se incadreaza in categoria de importanta B (constructii de importanta deosebita), modelul 1 de asigurare a calitatii si clasa de importanta B, conform HG 766/1997.
6. Proiectul va fi verificat la exigentele A4.2; B2.2; D2.2.
7. Se atrage in mod deosebit atentia asupra obligativitatii rezemarii elevatiilor prefabricate pe blocul de fundatie prin intermediul unui strat de mortar de ciment pentru a se realiza un contact perfect pe toata suprafata intre talpa prefabricatului si fundatie. Se interzice rezemarea directa fara strat de moratar de ciment.

NOTE:

1. This plan has been drawn up based on the following data:
-Lay-out Plan
-Longitudinal Profile
-Cross-section Profile
-Bridge's File
-Hydraulic determination
-Field Data
2. The culvert corresponds to the UIC determination convoys (LM71 and SW/2).
3. The execution will strictly comply with the provisions of "Practice code for the concrete production and works execution, reinforced and pre-stressed concrete - Part 1: Practice code for concrete production" NE 012/1-2007 and "Practice code for the concrete production and works execution, reinforced and pre-stressed concrete - Part 2: The execution of concrete works." NE 012/2-2010, and the quality and the reception of the works shall be made accordingly to Norm C 56-1985.
4. If during the execution, discrepancies are found between the existing situation on site and the situation stated in the project, the designer will be noticed.
5. The construction has been classified in B category of importance (high important constructions), model 1-ensuring the quality and class of importance B according to G.O. 766/97.
6. The project will be checked in order to comply with the A4.2; B2.2; D2.2 requirements.
7. Particular attention is drawn on binding prefabricated elevations settlement on block foundation through a layer of cement mortar to achieve a perfect contact over the entire surface between precast and foundation base.Propping is prohibited without direct layer of cement mortar.

TERIAL METALIC PENTRU CONFECTIONAREA PARAPETULUI TIMPANULUI
THE METALLIC MATERIAL TO BUILD PARAPET OF TYMPAN

Piesa Piece	Denumirea materialului The denomination of the material OL EN 10025 - S235 JR	Buc.	Sectiune Section	Lung. Long. (mm)	Sectiune/Section		
					kg/ml	kg/buc	kg
P1'	Placuta prindere Clamping plate	4+3	200x20	200	31.40	6.28	43.96
P2'	Stalp parapet EN 10297 - E275 Parapet pole	4+2	70x4	970	6.51	6.32	31.52
P3'	Mana curenta EN 10297 - E275 Handrail	2	70x4	1600	6.51	10.4	21.00
P4'	Umplutura EN 10058 Filling	2	38x3,5	900	2.98	2.68	5.36
P5'	Lisa EN 10058 Ledge	2	38x3,5	900	2.98	2.68	5.36
P3''	Mana curenta EN 10297 - E275 Handrail	1	70x4	4200	6.51	27.34	27.34
P4''	Umplutura EN 10058 Filling	2	38x3,5	1950	2.98	5.81	11.62
P5''	Lisa EN 10058 Ledge	2	38x3,5	1950	2.98	5.81	11.62
Total partial Partially total							157.80
Sudura 2% Welding 2%							3.20
TOTAL kg							161.00

MATERIAL METALIC PENTRU CONFECTIONAREA PARAPETULUI PODETULUI
THE METALLIC MATERIAL TO BUILD PARAPET OF CULVERT

Poz. Piece	Denumirea materialului The denomination of the material OL EN 10025 - S235 JR	Buc.	Sectiune Section	Lung. Long. (mm)	Sectiune/Section		
					kg/ml	kg/buc	kg
P1	Placuta prindere Clamping plate	4	200x20	200	31.40	6.28	25.12
P2	Stalp parapet EN 10297 - E275 Parapet pole	4	70x4	970	6.51	6.32	25.26
P3	Mana curenta EN 10297 - E275 Handrail	2	70x4	2900	6.51	18.88	37.76
P4	Umplutura EN 10058 Filling	2	38x3,5	1980	2.98	5.90	11.80
P5	Lisa EN 10058 Ledge	2	38x3,5	1980	2.98	5.90	11.80
Total partial Partially total							111.74
Sudura 2% Welding 2%							2.24
TOTAL kg							115

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D					
C					
B					
A	12.2011	Revizia 1	Elena Radu		
Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer	Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR

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	SemnŁturŁ Signature
Aprobat Approved	ķef proiect Project manager	R. Liuzza		
Aprobat Approved	Coordonator SecŞune 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. Dinulescu Stanciu	08.2011	
Ċtocmit Elaborated	Proiectant Designer	Elena Radu	08.2011	

Reabilitarea liniei de cale ferata Braкov - Simeria, parte componentŁ a coridorului IV Pan European, pentru circulaŞa trenurilor cu viteza maximŁ 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 :

INTERVAL / SECTION ARCHITA - VANATORI
PODET - KM 262+477.972 / KM 262+477.972 - CULVERT
DISPOZITIE GENERALA / GENERAL LAYOUT

Codificare / Codification System	Scara / Scale 1:100; 1:5	LOT / LOT	Nr. / No 01 / 01

E A 5 1 | 0 1 | C | 1 6 | P A | P O | 0 7 | 8 | 1 | 0 0 2 | 1