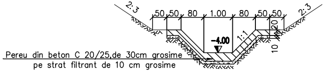
SECTIUNE TRANSVERSALA E–E
E–E CROSS SECTION


2:3
50
50
80
1.00
80
50
50
2:3
-4.00
1:1
20
10
Pereu din beton C 20/25,de 30cm grosime
pe strat filtrant de 10 cm grosime

NOTA
Numar de elemente prefabricate
–Cadre C2 : 14buc
–Aripi prefabricate A2. 2buc.
–Timpane prefabricate 2buc

NOTE
Number of precast section
–Prefabricated frames C2 14pcs.
–Prefabricated wings A2 2pcs.
–Head–wall 2pcs.

DATE HIDRAULICE:
–Inaltimea de apa: h=0,81m
–Perimetrul udat: P=3,62m
–Aria udata: A=1,62m²
–Viteza de curgere a apei V=2,83m/s

HIDRAULIC DATA:
–Hydraulic height: h=0,81m
–Perimeter: P=3,62m
–surface: A=1,62m²
–Water flow speed: V=2,83m/s

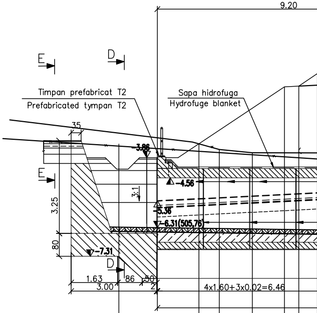
LEGENDA BETOANELOR
CONCRETE LIST

▧ –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 in fundatia podetelor, a elementelor de racordare (aripi, pinteni), in pereu
Concrete for the foundations of culverts, of connecting elements
(wings, breakwaters), in pitching
C25/30–CEM II/A–S 32,5–(XF1)–A/C=0,50–Dmax32–Cl0.20

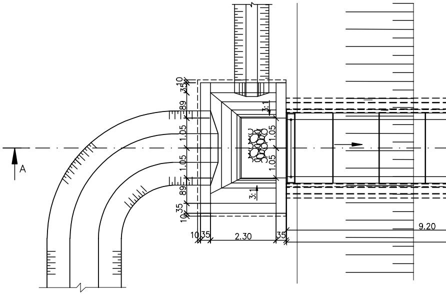
▨ –Beton în rigola drenurilor, fundatiile sferturilor de con si pentru realizarea stratului suport pentru pereu:
–Concrete for the drain gutters, for the foundations of cone quarters and for the support layer of revetment:
C 25/30 – CEM II/A – S 32,5 – (XC4+XF3+XA1) – A/C = 0,50 – Dmax32 – Cl 0,20

▩ –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

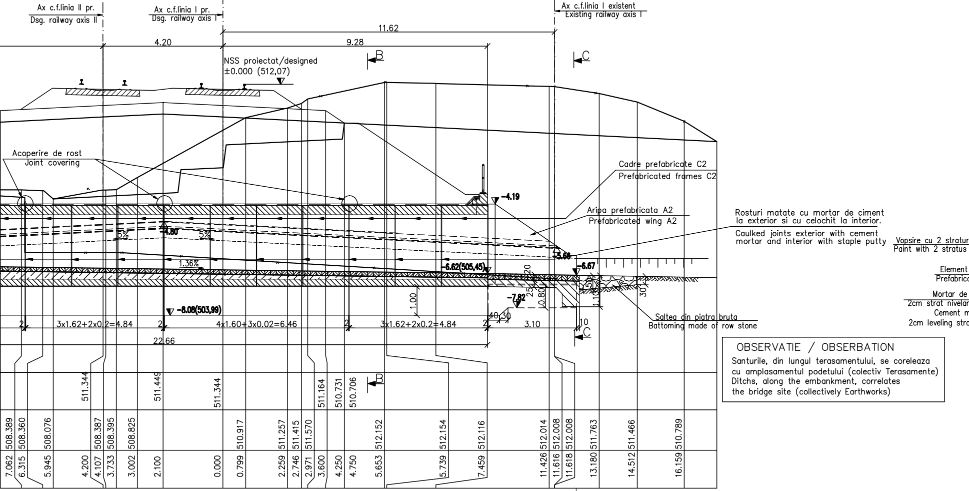

9.20
E
D
Timpan prefabricat T2
Prefabricated tympan T2
Sapa hidrofuga
Hydrofuge blanket
35
-3.86
E
-4.56
3:1
3.25
-5.36
-6.31(505.76)
80
-7.31
D
1.63
3.00
86
50
2
4x1.60+3x0.02=6.46

502.0 m datum

Nivelul platformei pr. Subgrade	509.079	508.711			510.706	510.731	511.164
Nivelul terenului existent Ground			508.513	508.396			
Distanta Distance	14.698	11.942	11.229	10.074	8.950	8.450	7.800


10
35
89
1.05
1.05
89
35
10
3:1
1.05
1.05
3:1
A
10
35
2.30
35
9.20

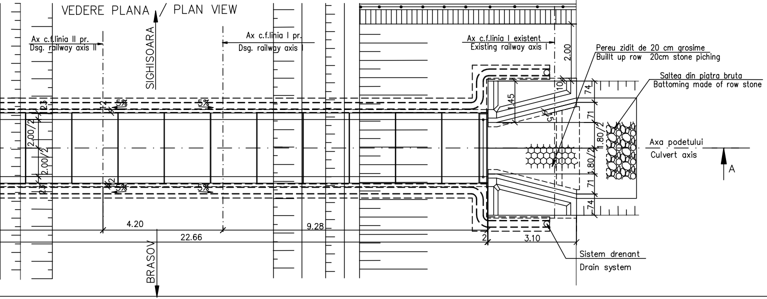
SECTIUNE LONGITUDINALA A–A/
LONGITUDINAL SECTION A–A

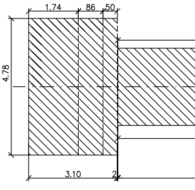

Ax c.f.linia II pr.
Dsg. railway axis II
Ax c.f.linia I pr.
Dsg. railway axis I
Ax c.f.linia I existent
Existing railway axis I
11.62
4.20
9.28
B
C
NSS proiectat/designed
±0.000 (512,07)
Acoperire de rost
Joint covering
Cadre prefabricate C2
Prefabricated frames C2
Aripa prefabricata A2
Prefabricated wing A2
-4.19
-4.80
5%
5%
1.36%
-5.68
-6.62(505,45)
-6.67
-7.82
-8.08(503,99)
1.00
0.80
25
20
1.10
50
30
40
30
10
Rosturi matate cu mortar de ciment
la exterior si cu celochit la interior.
Caulked joints exterior with cement
mortar and interior with staple putty
Vopsire cu 2 stratur
Paint with 2 stratus
Element
Prefabrica
Mortar de
2cm strat nivelar
Cement m
2cm leveling stra
Saltea din piatra bruta
Battoming made of row stone
2
3x1.62+2x0.2=4.84
2
4x1.60+3x0.02=6.46
2
3x1.62+2x0.2=4.84
2
3.10
22.66
C
B
511.344
511.449
511.344
511.164
510.731
510.706
508.389
508.360
508.076
508.387
508.395
508.825
510.917
511.257
511.415
511.570
512.152
512.154
512.116
512.014
512.008
512.008
511.763
511.466
510.789
7.062
6.315
5.945
4.200
4.107
3.733
3.002
2.100
0.000
0.799
2.259
2.746
2.971
3.600
4.250
4.750
5.653
5.739
7.459
11.426
11.616
11.618
13.180
14.512
16.159

OBSERVATIE / OBSERBATION

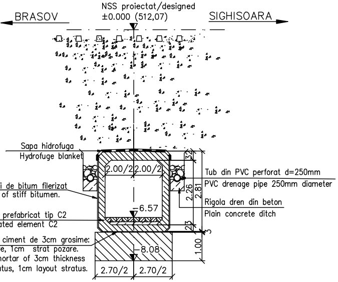
Santurile, din lungul terasamentului, se coreleaza cu amplasamentul podetului (colectiv Terasamente)
Ditchs, along the embankment, correlates the bridge site (collectively Earthworks)

VEDERE PLANA / PLAN VIEW

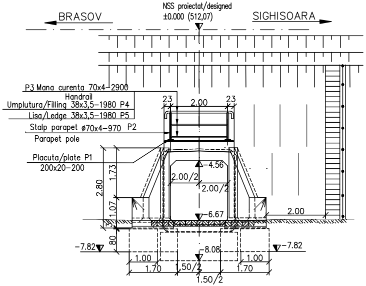

SIGHISOARA
BRASOV
Ax c.f.linia II pr.
Dsg. railway axis II
Ax c.f.linia I pr.
Dsg. railway axis I
Ax c.f.linia I existent
Existing railway axis I
2.00
Pereu zidit de 20 cm grosime
Buillt up row 20cm stone piching
Saltea din piatra bruta
Battoming made of row stone
Axa podetului
Culvert axis
A
5%
5%
5%
5%
2.00/2
2.00/2
23
23
12
12
10
74
71
1.80/2
1.80/2
71
74
1.45
50
4.20
22.66
9.28
2
3.10
Sistem drenant
Drain system


1.74
86
50
4.78
3.10
2

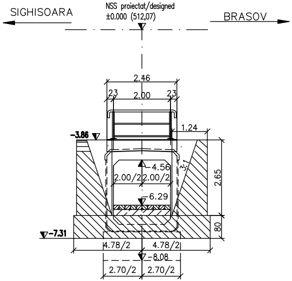
SECTIUNE TRANSVERSALA B–B
CROSS SECTION B–B


BRASOV
NSS proiectat/designed
±0.000 (512,07)
SIGHISOARA
Sapa hidrofuga
Hydrofuge blanket
i de bitum filerizat
of stiff bitumen.
prefabricat tip C2
ated element C2
ciment de 3cm grosime:
e, 1cm strat pozare.
mortar of 3cm thickness
tus, 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
-6.57
-8.08
32
2.26
2.81
23
1.00
5
2.70/2
2.70/2

SECTIUNE C–C
C–C SECTION


BRASOV
NSS proiectat/designed
±0.000 (512,07)
SIGHISOARA
P3 Mana curenta 70x4–2900
Handrail
Umplutura/Filling 38x3,5–1980 P4
Lisa/Ledge 38x3,5–1980 P5
Stalp parapet ø70x4–970 P2
Parapet pole
Placuta/plate P1
200x20–200
23
2.00
23
-4.56
2.00/2
2.00/2
-6.67
-8.08
-7.82
-7.82
2.80
1.73
1.07
31
80
2.00
1.00
1.70
1.50/2
1.50/2
1.00
1.70

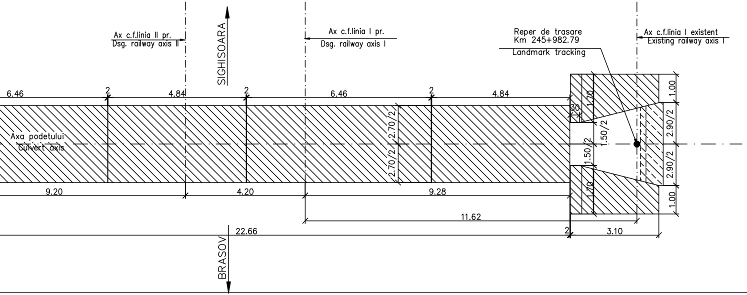
SECTIUNE D–D
D–D SECTION


SIGHISOARA
NSS proiectat/designed
±0.000 (512,07)
BRASOV
2.46
23
2.00
23
1.24
-3.86
-4.56
2.00/2
2.00/2
-6.29
3.1
2.65
80
-7.31
4.78/2
4.78/2
-8.08
2.70/2
2.70/2

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
P1	Placuta prindere Clamping plate	4	200x20	200	31.40	6.28
P2	Stalp parapet EN 10297 – E275 Parapet pole	4	70x4	970	6.51	6.32
P3	Mana curenta EN 10297 – E275 Handrail	2	70x4	2900	6.51	18.88
P4	Umplutura EN 10058 Filling	2	38x3,5	1980	2.98	5.90
P5	Lisa EN 10058 Ledge	2	38x3,5	1980	2.98	5.90
Total partial Partially total						
Sudura 2% Welding 2%						
TOTAL kg						

PLANUL FUNDATIILOR
FUNDATION PLAN


Ax c.f.linia II pr.
Dsg. railway axis II
SIGHISOARA
Ax c.f.linia I pr.
Dsg. railway axis I
Reper de trasare
Km 245+982.79
Landmark tracking
Ax c.f.linia I existent
Existing railway axis I
6.46
2
4.84
2
6.46
2
4.84
Axa podetului
Culvert axis
2.70/2
2.70/2
30
1.70
1.50/2
1.50/2
1.70
1.00
2.90/2
2.90/2
1.00
9.20
4.20
9.28
11.62
22.66
2
3.10
BRASOV

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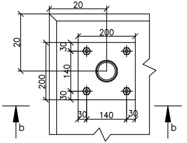
DETALIU PENTRU PRINDEREA PLACUTELOR P1 DE TIMPAN
DETAIL TO JOIN THE SLABS P1 AT THE TYMPANUM

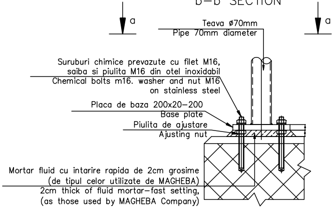
Scara 1:5

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)

kg
25.12
25.26
37.76
11.80
11.80
111.74
2.24
115

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.

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

CFR

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

AREX COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A. Dinulescu Stanciu	10.2011	
Întocmit Elaborated	Proiectant Designer	Elena Radu	10.2011	

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 :

INTERVAL / SECTION: CATA - ARCHITA
PODET - KM 245+982,790 / KM 245+982,790 - CULVERT
DISPOZITIE GENERALA / GENERAL DISPOSITION

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

E A 5 1 0 1 C 1 4 P A P O 0 5 5 1 0 0 2 1