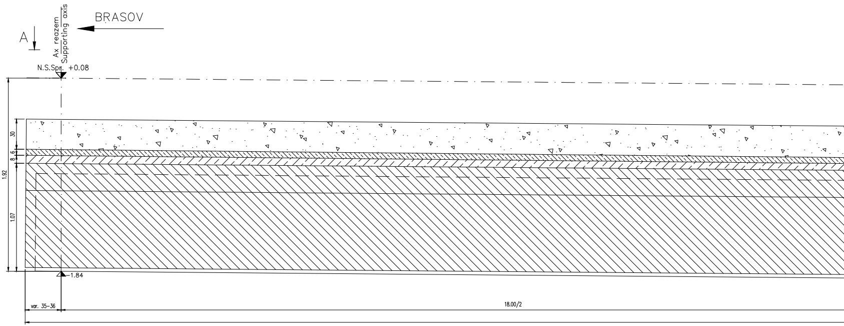
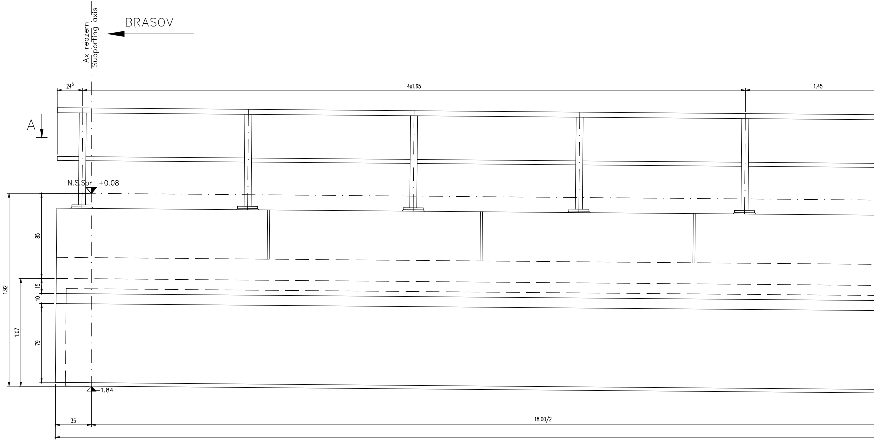
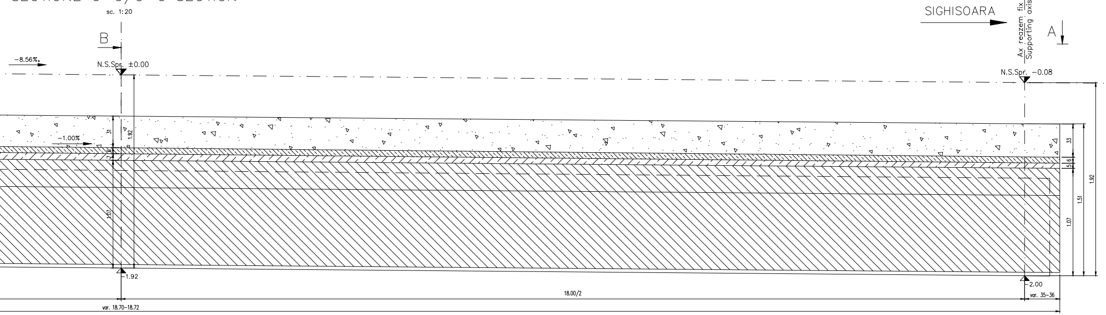

A
Ax reazem
Supporting axis
BRASOV
N.S.Spr. +0.08
30
8
6
1.92
1.07
-1.84
var. 35-36
18.00/2


Ax reazem
Supporting axis
BRASOV
24⁵
4x1.65
1.45
A
N.S.Spr. +0.08
85
15
10
79
1.92
1.07
-1.84
35
18.00/2

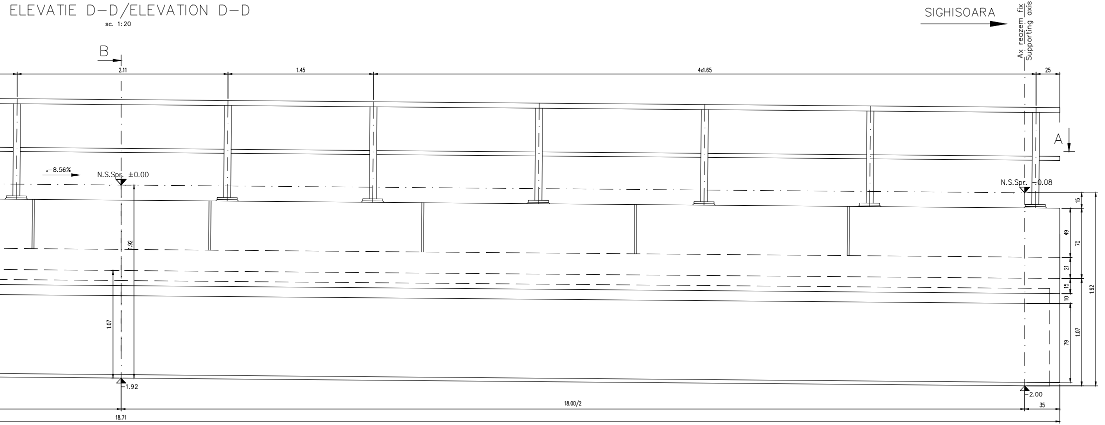
SECTIUNE C–C/C–C SECTION

sc. 1:20


SIGHISOARA
Ax reazem fix
Supporting axis
A
B
-8.56‰
N.S.Spr. ±0.00
N.S.Spr. -0.08
-1.00%
31
1.92
7
6
1.07
-1.92
-2.00
33
5
6
1.51
1.07
1.92
18.00/2
var. 35–36
var. 18.70–18.72

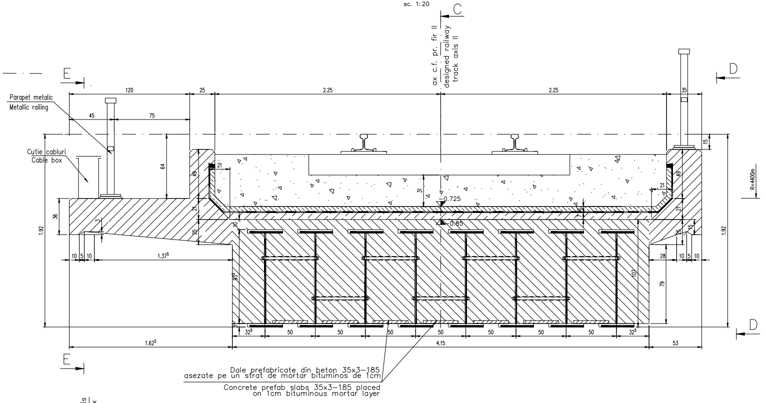
ELEVATIE D–D/ELEVATION D–D

sc. 1:20

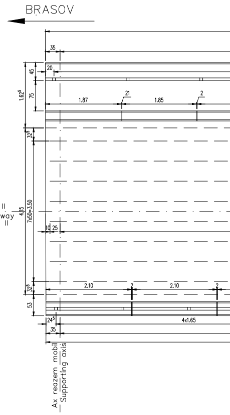

SIGHISOARA
Ax reazem fix
Supporting axis
B
2.11
1.45
4x1.65
25
A
-8.56%
N.S.Spr. ±0.00
N.S.Spr. -0.08
1.92
1.07
-1.92
-2.00
15
49
70
21
15
10
79
1.07
1.92
18.00/2
35
18.71

SECTIUNE TRANSVERSALA B–B
B–B CROSS SECTION

sc. 1:20

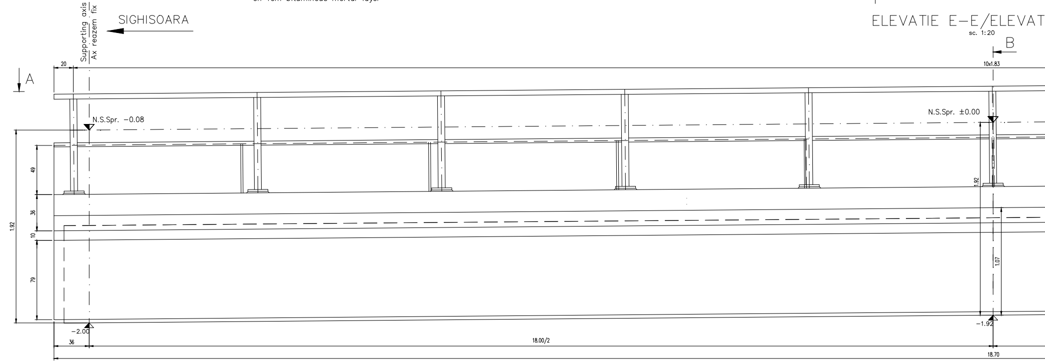

C
ax c.f. pr. fir II
designed railway track axis II
E
D
Parapet metalic
Metallic railing
Cutie cabluri
Cable box
120
25
2.25
2.25
35
45
75
64
49
15
R=4400m
21
31
-0.725
-0.85
36
1.92
3
21
25
10
10
5
10
1.37⁵
93⁵
107
79
28
10
5
10
25
15
32⁵
50
50
50
50
50
50
50
32⁵
1.62⁵
4.15
53
Dale prefabricate din beton 35x3–185 asezate pe un strat de mortar bituminos de 1cm
Concrete prefab slabs 35x3–185 placed on 1cm bituminous mortar layer

BRASOV


BRASOV
35
20
45
75
1.62⁵
1.87
21
1.85
2
32⁵
c.f. pr. fir II
designed railway track axis II
4.15
7x50=3.50
10
25
2.10
2
2.10
2
32⁵
53
24⁵
35
4x1.65
Ax reazem mobil
Supporting axis

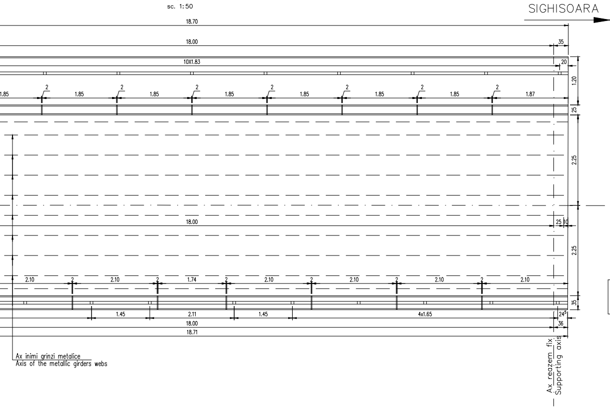
ELEVATIE E–E/ELEVAT

sc. 1:20


Supporting axis
Ax reazem fix
SIGHISOARA
B
A
20
10x1.83
N.S.Spr. -0.08
N.S.Spr. ±0.00
49
36
10
79
1.92
1.92
1.07
-2.00
-1.92
36
18.00/2
18.70

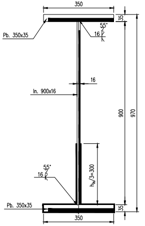
VEDERE IN PLAN A–A/ PLAN VIEW A–A

sc. 1:50


SIGHISOARA
18.70
18.00
35
10X1.83
20
1.20
2
1.85
1.87
25
2.25
18.00
25
10
2.25
2.10
1.74
35
1.45
2.11
4x1.65
24⁵
36
18.71
Ax inimi grinzi metalice
Axis of the metallic girders webs
Ax reazem fix
Supporting axis

GRINDA METALICA

SC.1:10


350
35
55°
16
Pb. 350x35
16
In. 900x16
900
970
55°
16
hw/3=300
Pb. 350x35
35
350

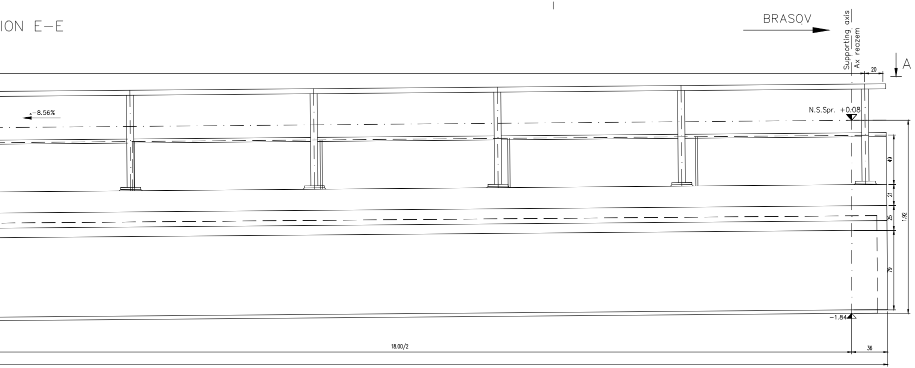
MATERIALE
(– OL37 EP STAS 12187–88 elementele grinzilor metalice)
– $S275J_3G_3$ EN 10025/2004

NOTA

1.La executia in uzina a grinzilor metalice sudate s
cu strictete prevederile STAS 9407–75.
2.In uzina se va aplica o protectie anticoroziva pe
si pe o treime din inima grinzilor metalice.
3.Protectia anticoroziva se va executa dintr–un str
dintr–o pelicula de zinc de 80µm grosime si doua
poliuretanic, fiecare de 85µm.
Stratul de baza si un invelis poliuretanic se vor a
urmand ca ultimul strat poliuretanic sa fie aplicat
finalizarea lucrarilor la suprastructura.
4.Pregatirea suprafetelor metalice in vederea aplica
protectie anticoroziva se face prin:
–Perierea de rugina cu ajutorul unor perii de sarm
–Spalarea suprafetelor metalice.
–Degresarea cu solventi organici prin stergere sau
–Dupa degresare se spala cu jet de apa pentru in
urmelor de detergent. Solutia pentru degresare va
astfel incat sa nu afecteze mediul.
Curatirea suprafetelor se va face conform gradului
si SR EN ISO 8501–1).

Beton:
Concrete:
Tipul grinzilor:
Beams type:
Otel pentru grinzi:
Steel for the beams:
Armatura:
Reinforcement:
Strat de acoperire:
Concrete cover
Clasa de incarcare:
Load class:
Cofraj:
Formwork:

ION E–E


BRASOV
Supporting axis
Ax reazem
20
A
–8.56%
N.S.Spr. +0.08
49
21
25
1.92
79
–1.84
18.00/2
36

AT

1. Turnarea
inclusiv
Replast,
2. Montare
de la tu

1. The con
including
retarder
2. The trac
28 days

e vor respecta

talpile inferioare

at de baza alcatuit
straturi de invelis

olica in uzina,
pe santier dupa

rii procedeelor de

a.

cu emulsii.
departarea
fi aleasa

Sa 1 (GE 053–04

NOTE

1.The prvisions STAS 9407–75 will be stricthy observed when the welded metallic girders are manufactered in the factory.
2.In the plant, corrosion protection will be applied on the lower flanges and on one third of the web of metallic girders.
3.The protection against corrosion will consist in a primary layer made of a zinc membrane (80µm thickness) and two polyurethane covering layer, each of 85µm thickness.
The primary layer and the first polyurethane covering layer will be applied in the factory and the second polyurethane layer will be applied on site, after completing the superstructure works.
finalizarea lucrarilor la suprastructura.
4.Preparing the metallic surfaces in order to apply the dorrosion–proof procedures shall be made by:
–Rust removal using wire brushes.
–Washing the metallic surfaces.
–Organic solvent degreasing by wiping or using emulsions.
–After degreasing, the surface is washed by water jet to eliminate the detergent stains. The solution selected for degreasing shall not affect the environment.
Cleaning the surfaces is made according to the Sa 1 (GE 053–04, SR EN ISO 8501–1).

LEGENDA BETOANELOR/CONCRETE LIST

▧	Beton armat in grinzi inglobate de clasa Concrete in bearings and in the deck slabs C30/37–CEM II/A–S 42,5–(XC4+XF3+XA1)–A/C=0,50–Dmax.16–Cl 0,20
▨	Beton de panta. Concrete in the protection layer of waterproofing system. C25/30–CEM II/A–S 32,5–(XF3)–A/C=0,55–Dmax.16–Cl 0,20
▧	Beton in stratul de protectie a hidroizolatiei Concrete in the protection layer of waterproofing system C25/30–CEM II/A–S 32,5–(XC4+XF3)–A/C=0,50–Dmax.16–Cl 0,20
▨	Beton in dalele prefabricate pentru grinzile inglobate in beton Concrete in the prefab slabs required for the decks made out of steel girders enbeded in to concrete C35/45–CEM II/A–S 42,5–(XC4+XF3+XA2)–A/C=0,50–Dmax.8–Cl 0,10

In cazul in care temperatura in timpul turnarii este scazuta, se vor folosi cimenturile cu rezistenta initiala mare, R si aditivi acceleratori, iar in cazul turnarii pe timp calduros, cimenturile cu rezistenta initiala uzuala, N si aditivi intarzietori, (conform NE012–2010 si tabelului 2 din SR EN 197–1: 2007)

When the temperature during the casting is low, cements with high initial resistance, R and accelerating additives shall be used and when it is cast during warm weather, cements with common initial resistance – N and delaying additives shall be used (according the norm NE 012 – 2010 and table 2 for the SR EN 197–1 : 2007).

NOTA

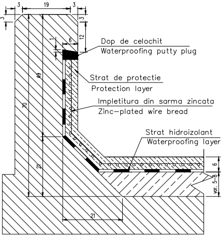
1. Prezentul plan s–a intocmit pe baza Dispozitiei Generale
2. Toate colturile betonului se vor tesi 25/25mm.
3. La executie se vor respecta cu strictete prevederile din "Normativ pentru producerea betonului si executarea lucrarilor din beton, beton armat si beton precomprimat. Partea 1:Producerea betonului", 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. 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.
5. Proiectul va fi verificat la exigentele A4.2; B2.2; D2.2.

NOTE

1. This plan was drawn up based on the General Disposition
2. All concrete corners will be chamfered 25/25mm.
3. The execution will strictly comply with the provisions of "Norm for concrete production and works execution, reinforced and pre–stressed concrete–Part 1: Practice code for concrete production NE 012/1–2007 and "Norm 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. 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.
5. The project will be checked in order to comply with the A4.2; B2.2; D2.2 requirements.

– C30/37 suprastructura/superstructure
– grinzi metalice sudate/steel welded girders
– (OL 37–EP) $S275J_3G_3$ (EN 10025/2004)
– S355
– min. 4cm expunere in aer/air exposed
– calculat cu convoiul T8.5, verificat cu convoiul UIC 71
– Metal sau lemn/Steel or wood

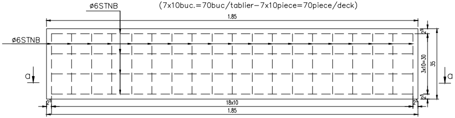
DETALIU SAPA
BLANCHET–DETAIL


3
19
3
3
3
12
1
6
49
70
21
21
6
var. 5–8
Dop de celochit
Waterproofing putty plug
Strat de protectie
Protection layer
Impletitura din sarma zincata
Zinc–plated wire bread
Strat hidroizolant
Waterproofing layer

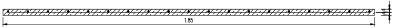
DALE PREFABRICATE DIN BETON ARMATE CU S.T.N.B.
CONCRETE PREFAB SLABS REINFORCED WITH S.T.N.B.

TIP 1/TYPE 1

(7x10buc.=70buc/tablier–7x10piece=70piece/deck)


ø6STNB
ø6STNB
1.85
a
a
2.5
3x10=30
35
2.5
2.5
18x10
2.5
1.85

SECTIUNE a–a/a–a SECTION



EXTRAS DE ARMATURA STNB PENTRU UN TABLIER DE CALE FERATA SIMPLA
TABLE FOR REINFORCEMENTS STNB FOR SINGLE YRAK RAIWAY DECK

TIP/TYPE	TIP ARMATURA TYEPE REINFOCEMENT	Nr. BUC. No. PIECE	kg/m	m/buc. m/piece	kg
TIP 1 TYPE 1	STNB 6 G.Q.283	70	0.222	14.70	230,00

ENTIE/ATENTION

betonului se va face continuu (fara intrerupere),
in console, in timp de max. 5 ore folosind intarzietor de priza
in cazul turnarii la temperatura ambianta de peste 10°C.
a caii, inclusiv balastul, se va face dupa minim 28 zile
urnarea dalei.

crete shall be continuausly pored (withent interruptions),
g into the braket, during max. 5 hours, using Replast
, in case of pouring at environment temperature over 10°C.
k, including the ballast shall be mounted after minimum
from the concrete slab pouring.

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D					
C					
B					
A	12.2011	Revizia 1 1 Revision	Campan Maria		
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

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	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		VK

SUBCONTRACTANT / SUBCONTRACTOR AREX COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A.Stanciu - Dinulescu	11.2011	
Întocmit Elaborated	Proiectant Designer	Campan Maria	11.2011	

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.
D.E. / E.D.

Denumire desen / Drawing Title : INTERVAL / SECTION RACOS
Viaduct Km 220+762.028 - D=2x55.0m+80.0m+55.0m +11.7m+2x18.0m-COFRAJ
SUPRASTRUCTURA TABLIER 2 D=18.00m
Bridge Km 220+762.028 - D=2x55.0m+80.0m+55.0m +11.7m+2x18.0m-SUPERSTRUCTURE
SHUTTERING DECK 2 D=18.00m

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

E A 5 1 | 0 1 | E | 1 1 | B B | P V | 0 2 | 1 | 3 | 0 0 8 | 1

420x2570