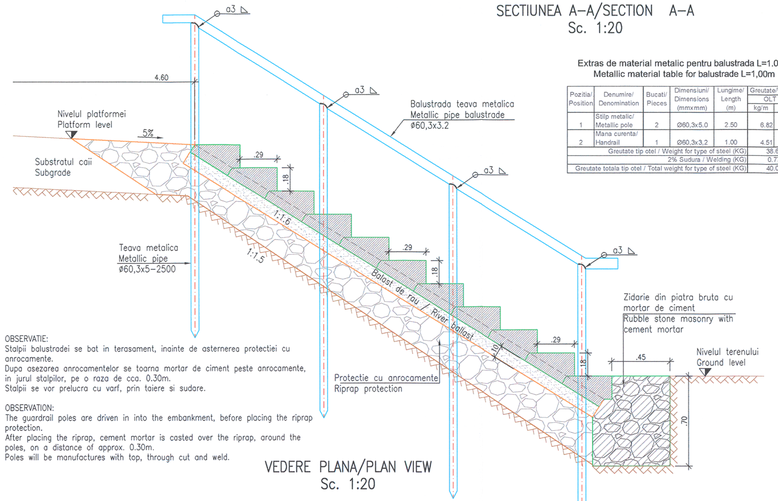
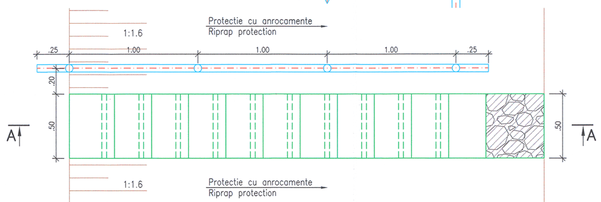
SECTIUNEA A–A/SECTION A–A
Sc. 1:20



OBSERVATIE:
Stalpii balustradei se bat in terasament, inainte de asternerea protectiei cu anrocamente.
Dupa asezarea anrocamentelor se toarna mortar de ciment peste anrocamente, in jurul stalpilor, pe o raza de cca. 0.30m.
Stalpii se vor prelucra cu varf, prin taiere si sudare.

OBSERVATION:
The guardrail poles are driven in into the embankment, before placing the riprap protection.
After placing the riprap, cement mortar is casted over the riprap, around the poles, on a distance of approx. 0.30m.
Poles will be manufactures with top, through cut and weld.

VEDERE PLANA/PLAN VIEW
Sc. 1:20



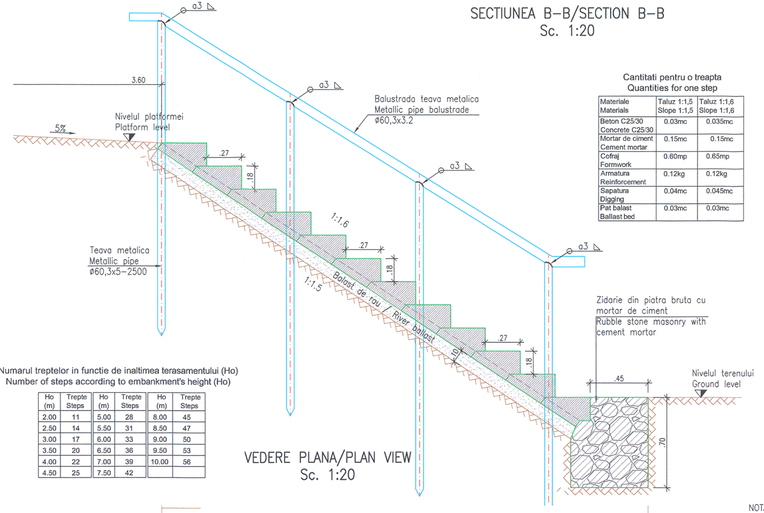
Extras de material metalic pentru balustrada L=1,00m
Metallic material table for balustrade L=1,00m

Pozitia/ Position	Denumire/ Denomination	Bucati/ Pieces	Dimensiuni/ Dimensions (mmxmm)	Lungime/ Length (m)	Greutate/Weight OLT 35 kg/m	OLT 35 kg
	Stilp metalic/ Metallic pole	2	Ø60,3x5.0	2.50	6.82	34.10
2	Mana curenta/ Handrail	1	Ø60,3x3.2	1.00	4.51	4.51
Greutate tip otel / Weight for type of steel (KG)						38.61
2% Sudura / Welding (KG)						0.77
Greutate totala tip otel / Total weight for type of steel (KG)						40.00

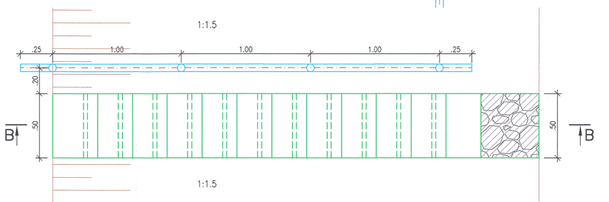
Numarul treptelor in functie de inaltimea terasamentului (Ho)
Number of steps according to embankment's height (Ho)

Ho (m)	Trepte Steps	Ho (m)	Trepte Steps	Ho (m)	Trepte Steps
2.00	11	5.00	28	8.00	45
2.50	14	5.50	31	8.50	47
3.00	17	6.00	33	9.00	50
3.50	20	6.50	36	9.50	53
4.00	22	7.00	39	10.00	56
4.50	25	7.50	42		

SECTIUNEA B–B/SECTION B–B
Sc. 1:20



VEDERE PLANA/PLAN VIEW
Sc. 1:20

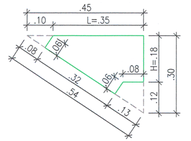


Cantitati pentru o treapta
Quantities for one step

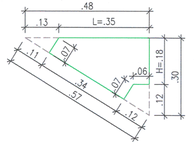
Materiale Materials	Taluz 1:1,5 Slope 1:1,5	Taluz 1:1,6 Slope 1:1,6
Beton C25/30 Concrete C25/30	0.03mc	0.033mc
Mortar de ciment Cement mortar	0.15mc	0.15mc
Cofraj Formwork	0.60mp	0.65mp
Armatura Reinforcement	0.12kg	0.12kg
Sapatura Digging	0.04mc	0.045mc
Pat balast Ballast bed	0.03mc	0.03mc

DETALII TREAPTE PREFABRICATE DIN BETON
DETAILS OF PREFABRICATED CONCRETE STEPS
Sc. 1:10

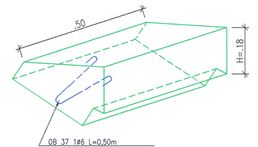
Treapa pentru taluz 1:1,5
Slope step 1:1,5



Treapa pentru taluz 1:1,6
Slope step 1:1,6



Carligul se taie dupa montarea treptelor
This hook will be cut after steps mounting



NOTA:
1. Scarile de acces pe terasament se vor amplasa la min. 1,00m de marginea aripilor sau de sfirsitul sfertului de con.
2. Treapta de beton se va turna in cofraj vertical, latura verticala fiind latimea de 50cm a treptei.
3. La fata superioara necofrata se va prevedea o ureche dintr–o bara OB37 ø6, care va servi la manipulari.
4. Balustrada din teava metalica se va adapta la situatia existenta pe teren.

Note:
1. The access stairs on embankment shall be placed at min. 1,00m from wings or cone quarter end.
2. The concrete step shall be cast in vertical formwork, where the vertical side is the step's 50cm width.
3. The un–shuttered upper side shall be provided with a ring executed of OB37 ø6 bar for handling purpose.
4. The metallic pipe balustrade shall be fitted to the existent site situation.

RĂCANEL I. IONUȚ ADRIAN
ROMÂNIA
M.L.P.A.T.
Nr. 07230
INGINER
VERIFICATOR PROIECTE

Prezentul plan anuleaza si inlocuieste versiunea anterioara
This plan cancels and replaces previous version

Verificator / Expert Checker / Expert	Cerinta Requirement	Semnatura Signature	Referat / Expertiza Report / Expertise

European Investment Bank

MINISTERUL TRANSPORTURILOR

BENEFICIAR / BENEFICIARY :

COMPANIA NATIONALĂ DE CĂI FERATE "CFR" SA

PROIECTANT / DESIGNER: PÖYRY			Data Date	Semnatura Signature
Aprobat Approved	Sef de echipa Team leader	C. Teodorescu	01.2013	
Verificat Checked	Expert Cheie Key Expert	R. Tudorascu	01.2013	
Subcontractant / Subcontractor: YIOTOP				
Aprobat Approved	Adjunct Sef de echipa Deputy Team leader	A.M. Baicu	01.2013	
Proiectat Designed	Inginer Engineer	T. Mihali	01.2013	

"Reabilitarea liniei c.f. Frontier ă - Curtici - Simeria , parte componentă a coridorului IV Pan - European pentru circula ţia trenurilor cu viteză maximă de 160 km/h"
Transonul 2-B : cap Y Bărzava - cap Y Ilteu
"Rehabilitation of the Railway Line Border - Curtici - Simeria , component Part of the IV Pan - European Corridor for the Trains Circulation with maximum speed of 160 km/h"
Section 2-B : end Y Bărzava - end Y Ilteu

Project 9i 35311.1

Faza / Phase: PTH+CS / TD+TS

Denumire desen / Drawing name:

SCARA DE ACCES SI BALUSTRADA METALICA
ACCESS STAIRS AND METALLIC BALUSTRADE

Scara / Scale	Revizia / Revision	Cod desen / Drawing Code	Nr / No
1:10 1:20	1 / 04.2013	PT.02.02.00.PO.22	22