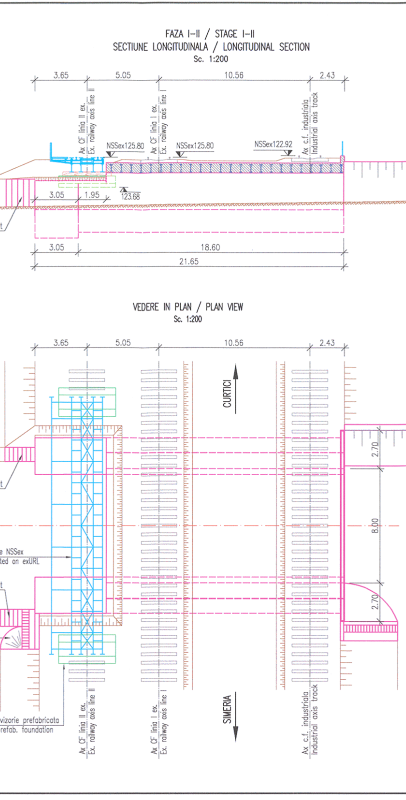
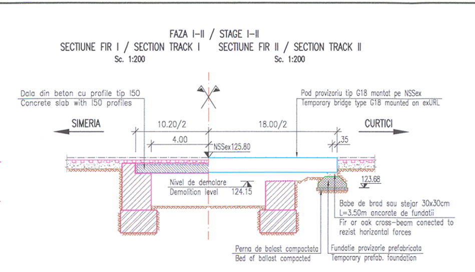

FAZA I–II / STAGE I–II
SECTIUNE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:200
VEDERE IN PLAN / PLAN VIEW
Sc. 1:200
Dale din beton armat
Concrete slabs
Poduri provizorii tip G18 montate pe N05ex
Temporary bridges type G18 mounted on N05ex
CURTICI
SIMERIA
Ax industriala
Industrial axis track


FAZA I–II / STAGE I–II
SECTIUNE FIR I / SECTION TRACK I
SECTIUNE FIR II / SECTION TRACK II
Sc. 1:200
SIMERIA
CURTICI
Nivel de demolare
Demolition level
Perna de balast compactata
Bed of ballast compacted
Fundatie provizorie prefabricata
Temporary prefab. foundation

FAZA I – Sub circulatie cu viteza normala pe toate liniile;

1. Organizarea de santier;
2. Indentificarea, pichetarea si punerea in siguranta a cablurilor (SCB, TTR, CED) din zona lucrarilor;
3. Executarea unui dig de argila in amonte si asigurarea evacuarii apelor din precipitatii printr–o teava ø400;

STAGE I – Under traffic with normal speed for all tracks;

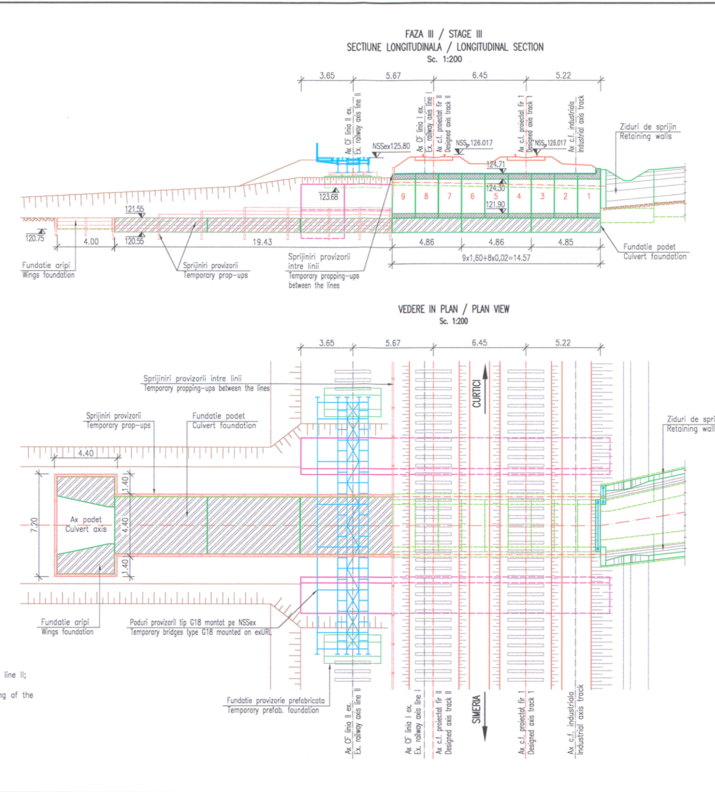
1. Site organization;
2. Indentifying, pegging–out and securing the cables (SCB, TTR, CED) from the works' area;
3. Executing a clay dyke upstream and ensuring the fallout water discharge through a pipe ø400;

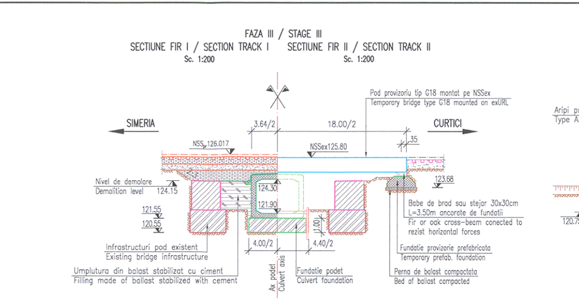
FAZA II – Linia I – Circulatie cu restrictie de viteza de 30km/h;
– Linia II – Inchiderea circulatiei;
– Linia industriala – Circulatie cu viteza normala;

1. Se scoate de sub tensiune firul II si se asigura protectia electrica;
2. Se sectioneaza si se se detensioneaza linia pe zona podului si se demonteaza suprastructura aferenta liniei II;
3. Se decapeaza terasamentul si se introduc in cale reazemele podului provizoriu;
4. Se demonteaza suprastructura podului aferenta liniei II (demontare a 3 dale prefabricate si demolarea corespunzatoare a dalei de beton cu profile metalice tip I50 pe 1.95m latime);
5. Se introduce in cale podul provizoriu tip G18;
6. Se monteaza calea se verifica elecroizolarea sinelor si se asigura protectia electrica;
7. Se repune sub tensiune linia de contact, si se deschide circulatia in trepte de viteza conform instructiunilor CFR;

STAGE II – Line I – Traffic with speed limit of 30km/h;
– Line II – Traffic closure;
– Industrial track – Traffic with normal speed;

1. Removing the voltage from track II and ensuring the electric protection;
2. Sectioning and removing the voltage from the line on the bridge area and demounting the superstructure afferent to line II;
3. Scraping the embankment and introducing in the track the bearing of the temporary bridge;
4. Dismantling the bridge superstructure afferent to line II (dismantling of 3 precast slabs and corresponding dismantling of the concrete slab with metallic profiles type I50, on a width of 1.95m).
5. Introducing in the track the temporary bridge type G18;
6. Mounting the track, checking the electric insulation of the rails and ensuring the electric protection;
7. Restoring the voltage to the contact line and opening the traffic with speed limits according to the CFR instructions;


FAZA III / STAGE III
SECTIUNE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:200
VEDERE IN PLAN / PLAN VIEW
Sc. 1:200
Fundatie aripi
Wings foundation
Sprijiniri provizorii
Temporary prop–ups
Fundatie podet
Culvert foundation
Ax podet
Culvert axis
Ziduri de sprijin
Retaining walls
CURTICI
SIMERIA

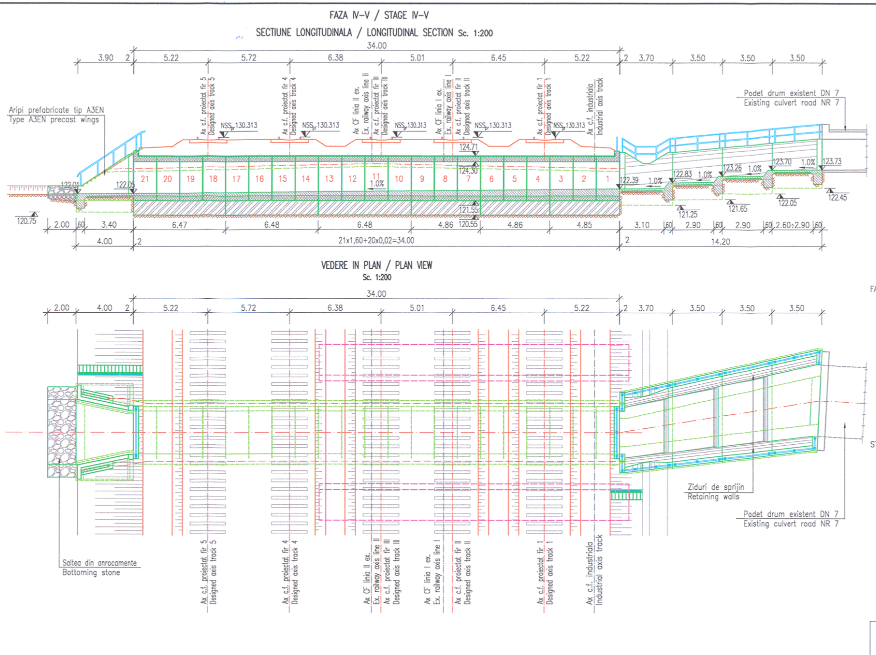

FAZA III / STAGE III
SECTIUNE FIR I / SECTION TRACK I
SECTIUNE FIR II / SECTION TRACK II
Sc. 1:200
SIMERIA
CURTICI
Nivel de demolare
Demolition level
Infrastructuri pod existent
Existing bridge infrastructure
Umplutura din balast stabilizat cu ciment
Filling made of ballast stabilized with cement
Fundatie podet
Culvert foundation
Perna de balast compactata
Bed of ballast compacted

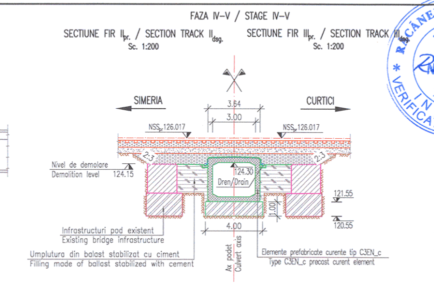
FAZA III – Linia II – Circulatie cu restrictie de viteza de 30 km/h;
– Linia I si linia industriala – Inchiderea circulatiei;

1. Se scoate de sub tensiune firul I si linia industriala, si se asigura protectia electrica;
2. Se sectioneaza si se se detensioneaza liniile;
3. Se demonteaza suprastructura aferenta liniei I si linia industiala;
4. Se demoleaza dala de beton cu profile metalice tip I50;
5. Se demoleaza partial elevatiile podului existent, pana la nivelul de executie a drenului din lungul podetului;
6. Se executa sapaturile pentru noul podet la adapostul sprijinirilor;
7. Se toarna fundatiile noului podet si a racordarilor cu terasamentul;
8. Se monteaza primele 9 elemente prefabricate tip C3 (1–9) , se trateaza rosturile dintre elementele prefabricate conform detaliilor din proiect;
9. Se executa zidurile de sprijin din amonte de podet.
10. Umplerea spatiului dintre elementele prefabricate ale podetului nou si elevatiilor podului existent cu balast stabilizat cu ciment;
11. Se executa drenurile laterale la cota, conform detaliilor din proiect;
12. Se asterne hidroizolatia si sapa de protectie a hidroizolatiei;
13. Se executa umplutura, conform caietului de sarcini, se reface terasamentul si calea în zona podetului racordand linia la pozitia si nivelul existent la data executiei. Umplutura se realizeaza cu ajutorul unor sprijiniri longitudinale intre linii;
14. Se asigura continuitatea circuitelor de cale, electroizolarea sinelor si protectia electrica;
15. Se repune sub tensiune linia de contact, si se deschide circulatia in trepte de viteza conform instructiunilor CFR;

STAGE III – Line II – Traffic with speed limit of 30 km/h;
– Line I and Industrial tack – Traffic closure

1. Removing the voltage from track I and industrial track, and ensuring the electric protection;
2. Sectioning and removing the voltage from the line;
3. Demounting the superstructure afferent to line I and industrial track;
4. Dismantling of the concrete slab with metallic profiles type I50;
5. Demolishing the elevations of the existing bridge, up to the drain execution level along the culvert;
6. Executing the excavations for the new culvert under the protection of the propping;
7. Casting the foundations of the new culvert and of the connections with the embankment;
8. Mounting the first 9 precast elements type C3 (1–9) , and treating the joints between the precast elements according to the details from the design;
9. Executing the retaining walls upstream from the culvert;
10. Filling the space between the precast elements of the new culvert and the elevations of the existing bridge with ballast stabilizet with cement;
11. Executing the side drains at the dimension, according to the details from the design;
12. Placing the waterproofing and the protection blanket of the waterproofing;
13. Executing the filling, according to the Technical Specifications, renewing the embankment and the track in the culvert's area connecting the line at the existing level and position at the execution date. The filling is made by help of longitudinal propping between the lines;
14. Ensuring the continuity of the track circuits, the electric insulation of the rails and the electric protection;
15. Restoring the voltage to the contact line and opening the traffic with speed limits according to the CFR instructions.


FAZA IV–V / STAGE IV–V
SECTIUNE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:200
VEDERE IN PLAN / PLAN VIEW
Sc. 1:200
Aripi prefabricate tip A3EN
Type A3EN precast wings
Podet drum existent DN 7
Existing culvert road NR 7
Saltea din anrocamente
Bottoming stone


FAZA IV–V / STAGE IV–V
SECTIUNE FIR Ipr / SECTION TRACK Idsg
SECTIUNE FIR IIpr / SECTION TRACK IIdsg
Sc. 1:200
SIMERIA
CURTICI
Nivel de demolare
Demolition level
Infrastructuri pod existent
Existing bridge infrastructure
Umplutura din balast stabilizat cu ciment
Filling made of ballast stabilized with cement
Ax podet
Culvert axis
Elemente prefabricate curente tip C3EN_c
Type C3EN_c precast curent element

FAZA IV – Linia I_{pr}, II_{pr} – Circulatie cu restrictie de viteza de 30 km/h;
– Linia II_{ex} – Inchiderea circulatiei;

1. Se scoate de sub tensiune firul II_{ex} si se asigura protectia electrica;
2. Se demonteaza si se scoate calea pe zona podului provizoriu;
3. Se scoate din cale podul provizoriu tip G18 si fundatiile acestuia;
4. Se monteaza restul de 12 elemente prefabricate tip C3 (10–21) si aripile prefabricate tip A3, si se trateaza rosturile dintre elementele prefabricate conform detaliilor din proiect;
5. Se executa umplutura din balast stabilizat cu ciment la cota;
6. Se executa drenurile laterale la cota, conform detaliilor din proiect;
7. Se asterne hidroizolatia si sapa de protectie a hidroizolatiei;
8. Se executa umplutura, conform caietului de sarcini, se reface terasamentul si calea în zona podetului racordand linia la pozitia si nivelul existent la data executiei;
9. Se asigura continuitatea circuitelor de cale, electroizolarea sinelor si protectia electrica;
10. Se repune sub tensiune linia de contact, si se deschide circulatia in trepte de viteza conform instructiunilor CFR;

STAGE IV – Line I_{dsg}, II_{dsg} – Traffic with speed limit of 30km/h;
– Line II_{ex} – Traffic closure;

1. Removing the voltage from track II_{ex} and ensuring the electric protection;
2. Demounting and removing the track on the area of the temporary bridge;
3. Removing from the track the temporary bridge type G18 and its foundations;
4. Mounting the other 12 precast elements type C3 (10–21) and precast wings type A3, treating the joints between the precast elements according to the details from the design;
5. Executing the filling made of ballast stabilized with cement at the dimension;
6. Executing the side drains at the dimension, according to the details from the design;
7. Placing the waterproofing and the protection blanket of the waterproofing;
8. Executing the filling, according to the Technical Specifications, renewing the embankment and the track in the culvert's area connecting the line at the existing level and position at the execution date;
9. Ensuring the continuity of the track circuits, the electric insulation of the rails and the electric protection;
10. Restoring the voltage to the contact line and opening the traffic with speed limits according to the CFR instructions.

FAZA V – Sub circulatie cu viteza normala pe toate liniile;

1. Se monteaza parapetul metalic de protectie;
2. Se executa pereul din interiorul podetului, intre aripi si zidurile de sprijin din amonte;
3. Se executa saltelele din anrocamente de la capatul pereului din aval;
4. Se desfiinteaza digul din argila din amonte si teava ø400;
5. Se dezafecteaza platformele de montaj si organizarea de santier si se redau terenurile ocupate temporar circuitului initial;

STAGE V – Under traffic with normal speed for all tracks;

1. Mounting the metallic protection handrail;
2. Executing the pitching inside the culvert, between the wings and upstream retaining walls;
3. Executing the riprap mattresses from downstream the end of the pitching;
4. Demolishing the upstream clay dyke and dismantling the metallic pipes ø400mm;
5. Closing–down the montage platforms and the site organization and restoring the sites occupied temporarily to the initial circuit.

NOTA:
1. Podetul se va executa obligatoriu inainte de executia lucrarilor la linii.
2. Tehnologia de executie se poate adapta in functie de dotarea constructorului.
3. Orice nepotrivire cu proiectul la executie se va aduce la cunostinta proiectantului pentru a stabili solutia.
4. Convoiul de calcul pentru podurile provizorii: 0.9T8.5.
5. Circulatia pe podurile provizorii se face cu viteza de maxim 30 km/h.

NOTE:
1. The culvert will be mandatorily executed before the execution of the line works.
2. The execution technology may be adapted depending on the constructor's endowment.
3. Any incongruity at execution with the design will be notified to the designer in order to find a solution.
4. Calculation convoy for the temporary bridges: 0.9T8.5.
5. Traffic on the temporary bridges takes place with maximum speed 30 km/h

RĂCĂNEL I. IONUȚ RADU
Nr. 07230

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

CHIRICĂ C. ANTON
Nr. 563

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

European Investment Bank

MINISTERUL TRANSPORTURILOR

BENEFICIAR / BENEFICIARY :
COMPANIA NAȚIONALĂ 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	VIOTOP			
Aprobat Approved	Adjunct Sef de echipa Deputy Team leader	A.M. Baicu	01.2013	
Proiectat Designed	Inginer Engineer	Oct. Lupu	01.2013	

"Reabilitarea liniei c.f. Frontieră - Curtici - Simeria, parte componentă a coridorului IV Pan - European pentru circulaţia trenurilor cu viteză maximă de 160 km/h"
Tronsonul 2-A : km 614 - cap Y Bârzava
"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-A : km 614 - end Y Bârzava

Project 9i
35311.1

Faza / Phase:
PTH+CS / TD+TS

Denumire desen / Drawing name:

TEHNOLOGIE DE EXECUTIE / EXECUTION TECHNOLOGY
PODET / CULVERT KM pr. 598+550 (KM ex. 601+885)

Scara / Scale	Revizia / Revision	Cod desen / Drawing Code	Nr / No
1:200	1 / 04.2013	PT.02.02.04.PO.03.04	04