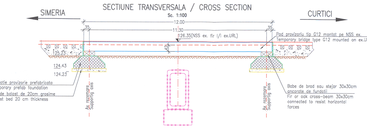
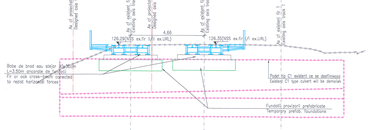
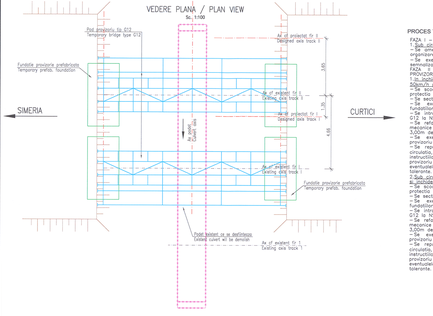
FAZA II.1 si II.2
SECTIUNE TRANSVERSALA / CROSS SECTION
Sc. 1:100



FAZA II.1 si II.2
SECTIUNE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:100



VEDERE PLANA / PLAN VIEW
Sc. 1:100



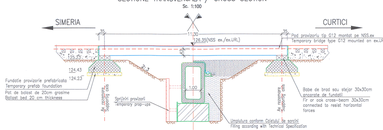
PROCES TEHNOLOGIC:

FAZA I – LUCRARI PREGATITARE:
1. Sub circulatia cu viteza normala pe ambele linii:
– Se amenajeaza platforma de acces, platforma tehnologica si organizarea de santier;
– Se executa lucrari de protectie si/sau devierie instalatii electrice si de telecomunicatii.
FAZA II – LUCRARI PENTRU INTRODUCEREA PODURILOR PROVIZORII TIP D12 C.m. in GALEI:
1. Sub circulatia cu restrictie de viteza pe linia I si restrictie de viteza de 30km/h pe linia II:
– Se asaza de bun tarsaune linia de contact si se asigura protectia electrica pe linia II;
– Se sectioneaza si deterioreaza linia I c.f. existenta;
– Se executa sapatura pentru introducerea in cale a podurilor provizorii si amenajarea acestora;
– Se introduc in cale fundatiile provizorii si pod provizoriu D12 la NDS existent;
– Se executa probele pod provizoriu. Nu se admit joante mecanice pe pod provizoriu. Ele se vor amplasa la minim 3,00m de capetele podul provizoriu;
– Se executa verificarea instalatiei electrice a podului provizoriu introdus in cale si se verifica electrosistemul;
– Se repune sub tensiune linia de contact, se redescide circulatia feroviara in treptele de viteza conform instructiilor in vigoare si se line sub observatie podul provizoriu pe toata durata de exploatare, cu remedierea eventualelor defecte si aducerea lor in limita admisa de toleranta.
2. Sub circulatia cu restrictie de viteza de 30km/h pe linia I si inchidere de circulatie pe linia II:
– Se scoate de sub tensiune linia de contact si se asigura protectia electrica pe linia II;
– Se sectioneaza si deterioreaza linia II c.f. existenta;
– Se executa sapatura pentru introducerea in cale a podurilor provizorii si amenajarea acestora;
– Se introduc in cale fundatiile provizorii si pod provizoriu D12 la NDS existent;
– Se executa probele pe podul provizoriu. Nu se admit joante mecanice pe podul provizoriu. Ele se vor amplasa la minim 3,00m de capetele podul provizoriu;
– Se executa verificarea instalatiei electrice a podului provizoriu introdus in cale si se verifica electrosistemul;
– Se repune sub tensiune linia de contact, se redescide circulatia feroviara in treptele de viteza conform instructiilor in vigoare si se line sub observatie podul provizoriu pe toata durata de exploatare, cu remedierea eventualelor defecte si aducerea lor in limita admisa de toleranta.

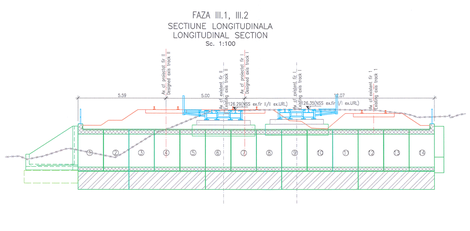
TECHNOLOGICAL PROCESS:

STAGE I – PRELIMINARY WORKS:
1. During traffic with normal speed on both lines:
– Arrangement of the access road, technological platform and site organization;
– Execution of protection and/ or deviation works at the signaling and telecommunication installations.
STAGE II – WORKS FOR PLACING THE TEMPORARY BRIDGE TYPE D12 TRACK ON THE MIDDLE INTO THE TRACK:
1. During traffic closure on line I and speed limit of 50km/h on line II:
– Cutting-off the voltage on the contact line and ensuring the electric protection of the line II;
– Sectioning and cutting-off the voltage on the existing railway line I;
– Executing the excavation in order to place into the track the temporary foundations and the temporary bridge D12;
– Placing into the track the temporary foundations and the temporary bridge D12 at the existing NDS (log of the rail);
– Renewing the track on the temporary bridge. No mechanical joints are allowed on the temporary bridge. They will be placed at minimum 3,00 m away from the ends of the bridge;
– Executing the works of electric protection at the temporary bridge placed into the track and checking the electric insulation;
– Restoring the voltage on the contact line, reopening the traffic with speed limit of 30 km/h according to the railway instructions in force and keeping under surveillance the temporary bridge during its operation, while remedying the eventual defects and restoring them to the allowed limit of tolerance.
2. During traffic with speed limit of 30km/h, on line I and traffic closure on line II:
– Cutting-off the voltage on the contact line and ensuring the electric protection of the line II;
– Sectioning and cutting-off the voltage on the existing railway line II;
– Executing the excavation in order to place into the track the temporary foundations and the temporary bridge D12;
– Placing into the track the temporary foundations and the temporary bridge D12 at the existing NDS (log of the rail);
– Renewing the track on the temporary bridge. No mechanical joints are allowed on the temporary bridge. They will be placed at minimum 3,00 m away from the ends of the bridge;
– Executing the works of electric protection at the temporary bridge placed into the track and checking the electric insulation;
– Restoring the voltage on the contact line, reopening the traffic with speed limit of 30 km/h according to the railway instructions in force and keeping under surveillance the temporary bridge during its operation, while remedying the eventual defects and restoring them to the allowed limit of tolerance.

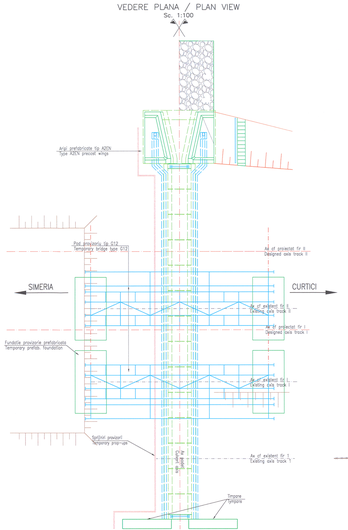
FAZA III.1, III.2
SECTIUNE TRANSVERSALA / CROSS SECTION
Sc. 1:100



FAZA III.1, III.2
SECTIUNE LONGITUDINALA
LONGITUDINAL SECTION
Sc. 1:100



VEDERE PLANA / PLAN VIEW
Sc. 1:100



NOTA:
1. CONVOIL DE CALCUL PENTRU PODURILE PROVIZORII:
0.9/8.5
2. Podurile provizorii se gasesc in dotarea Beneficiarului si pot fi puse la dispozitia Constructorului
3. Circulatia pe podurile provizorii se face cu viteza de maxim 30 km/h

NOTE:
1. CALCULATION CONVOY FOR THE TEMPORARY BRIDGES:
0.9/8.5
2. Temporary bridges are in the endowment of the Beneficiary and can be made available to the Contractor
3. Traffic on the temporary bridges takes place with maximum speed 30 km/h

FAZA III– LUCRARI PENTRU EXECUTAREA PODETULUI NOU:
1. Sub circulatie cu restrictie de viteza de 30km/h si odoptarea podurilor provizorii pe podetul existent:
– Se executa podetul existent;
– Se executa sapaturile cu agricioli pentru fundatiile noi;
– Se betoneaza fundatiile aripilor si podetului.

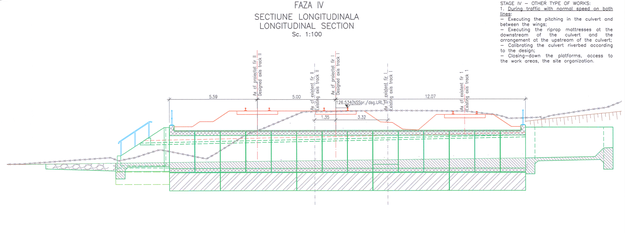
2. In inchidere de circulatie pe linia II si circulatie cu restrictie de viteza de 30km/h pe linia I:
– Se scoate de sub tensiune linia de contact si se asigura protectia electrica;
– Se deseiste calea de pod provizoriu;
– Se executa sapatura pentru montarea prefabricate ale acestuia;
– Se introduc cu macaraua elementele prefabricate corespunzatoare zonei liniei II (se asaeaza elementul prefabricat, se montaeaza in poiuze de circulatie si cu scoaterea de sub acestea a liniei provizorii de rulare);
– Se executa umpluturile prin retrogerea sprijinitilor din lungul podetului si se executa sistemul stratificat de sprijin (se toarna cu atata pe lungimea respectiva a podetului);
– Se executa umpluturile ramase de la nivelul esteriorul drenant, in straturi bine compactate, conform coeficiul de asrcini;
– Se refac caile si se redeschide circulatia pe acestea;
– Se refac caile pe pona podetului;
– Se repune sub tensiune linia de contact, se refac circuitele de cale si se redeschide circulatia feroviara in treptele de viteza conform instructiilor in vigoare.

3. In inchidere de circulatie pe linia I si circulatie cu restrictie de viteza de 30km/h pe linia II:
– Se scoate de sub tensiune linia de contact si se asigura protectia electrica;
– Se deseiste calea de pod provizoriu;
– Se scot din cale podul provizoriu, fundatiile prefabricate ale acestuia;
– Se introduc cu macaraua elementele prefabricate corespunzatoare zonei liniei I si se montaeaza prefabricatele 7, 8 si aripile prefabricate;
– Se executa umpluturile prin retrogerea sprijinitilor din lungul podetului si se executa sistemul stratificat de sprijin (se toarna cu atata pe lungimea respectiva a podetului);
– Se executa umpluturile ramase de la nivelul esteriorul drenant, in straturi bine compactate, conform coeficiul de asrcini;
– Se refac caile si se redeschide circulatia pe acestea;
– Se refac caile pe pona podetului;
– Se repune sub tensiune linia de contact, se refac circuitele de cale si se redeschide circulatia feroviara in treptele de viteza conform instructiilor in vigoare.

STAGE III – WORKS TO EXECUTE THE NEW CULVERT:
1. During traffic with speed limit of 30km/h, under the protection of temporary bridge on both lines:
– Arrangement of the working culvert;
– Executing the excavations with prop-use for the new foundations;
– Concreting the foundations of the wings and culvert.
2. During traffic closure on line II and traffic with speed limit of 30km/h on line I:
– Cutting-off the voltage on the contact line and ensuring the electric protection;
– Dismantling the track on the temporary bridge;
– Removing from the track the temporary bridge, its precast foundations;
– Placing into the track, by help of crane, the precast elements corresponding to the area of line II (the such precast element is mounted during traffic brakes and the temporary bridge from along the culvert, the such precast element is mounted);
– Executing the fillings by removing the prop-use from along the culvert and executing the drainage system, including the waterproofing on the entire length of the culvert;
– Executing the fillings left from the level of the drainage system into well-compacted layers, according to the Technical Specifications;
– Renewing the embankment of the dealing levels;
– Renewing the track on the sred of the culvert;
– Restoring the voltage on the contact line, renewing the track circuite and reopening the railway traffic with speed limits according to the railway instructions in force.
3. During traffic closure on line I and traffic with speed limit of 50km/h on line II:
– Cutting-off the voltage on the contact line and ensuring the electric protection;
– Dismantling the track on the temporary bridge, its precast foundations;
– Removing from the track the temporary bridge;
– Placing into the track, by help of crane, the precast elements corresponding to the area of line I (the such precast element is mounted during traffic brakes and the temporary bridge from along the culvert, the such precast element is mounted);
– Executing the fillings by removing the prop-use from along the culvert and executing the drainage system, including the waterproofing on the entire length of the culvert;
– Executing the cathode protection;
– Executing the fillings left from the level of the drainage system into well-compacted layers, according to the Technical Specifications;
– Renewing the embankment of the dealing levels;
– Renewing the track on the sred of the culvert;
– Restoring the voltage on the contact line, renewing the track circuite and reopening the railway traffic with speed limits according to the railway instructions in force.

FAZA IV – ALTE TIPURI LUCRARI:
1. Sub circulatie cu viteza normala pe ambele linii:
– Se executa peraul in podet si intre aripi;
– Se executa salbeaua din annocamenta de la podetul nou si podetului si amenajeaza acestora;
– Se cataroseaza albia podetului conform protectiului;
– Se dezafectaza platformele, accesele din zona podetului si se amenajeaza terenul.
– Se executa rigola matisseara at the downstream of the culvert and the embankment of the dealing levels;
– Concreting the culvert riverbed according to the design;
– Closing-down the platforms, access to the work areas, the site organization.

FAZA IV
SECTIUNE LONGITUDINALA
LONGITUDINAL SECTION
Sc. 1:100



ACADEMIA I. IONCIȚESCU
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NR: 07230
ȘTIINȚE TEHNICE
INVENTATOR PROIECTANT

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 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: MOTOP

Aprobat Approved	Adjunct Sef de echipa Deputy Team leader	A.M. Baicu	01.2013	
Proiectat Designed	Inginer Engineer	F. Ioanidi	01.2013	

"Reabilitarea liniei c.f. Frontiera 2 - Curtici - Simeria , parte componenta a coridorului IV Pan - European pentru circulația trenurilor cu viteză maximă de 160 km/h"
Tronsonul 2-A : km 614 - cap T Bârzava
"Rehabilitation of the Railway Line Border - Curtici - Simeria , component Part of the IV Pan - European Corridor for Passenger Trains Circulation with maximum speed of 160 km/h"
Section 2-A : km 614 - end T 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+071 (KM ex. 601+395)

Scara / Scale	Revizia / Revision	Cod desen / Drawing Code	Nr / No
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