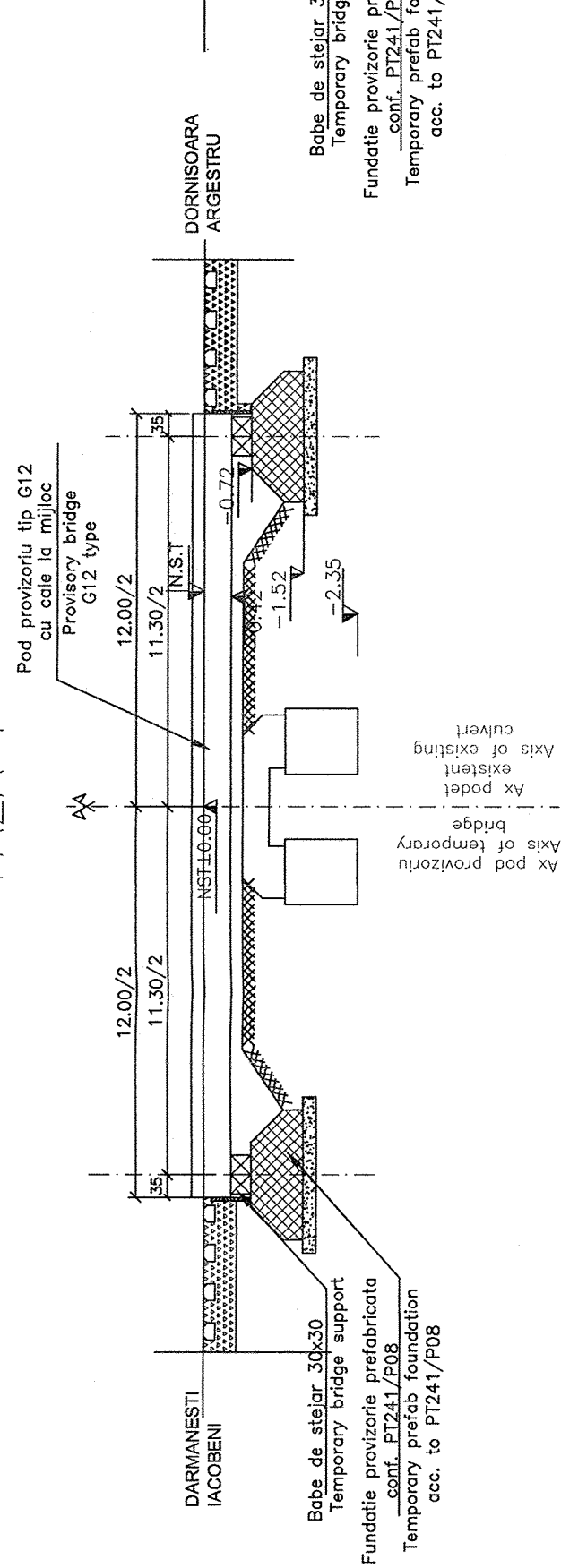


FAZA I



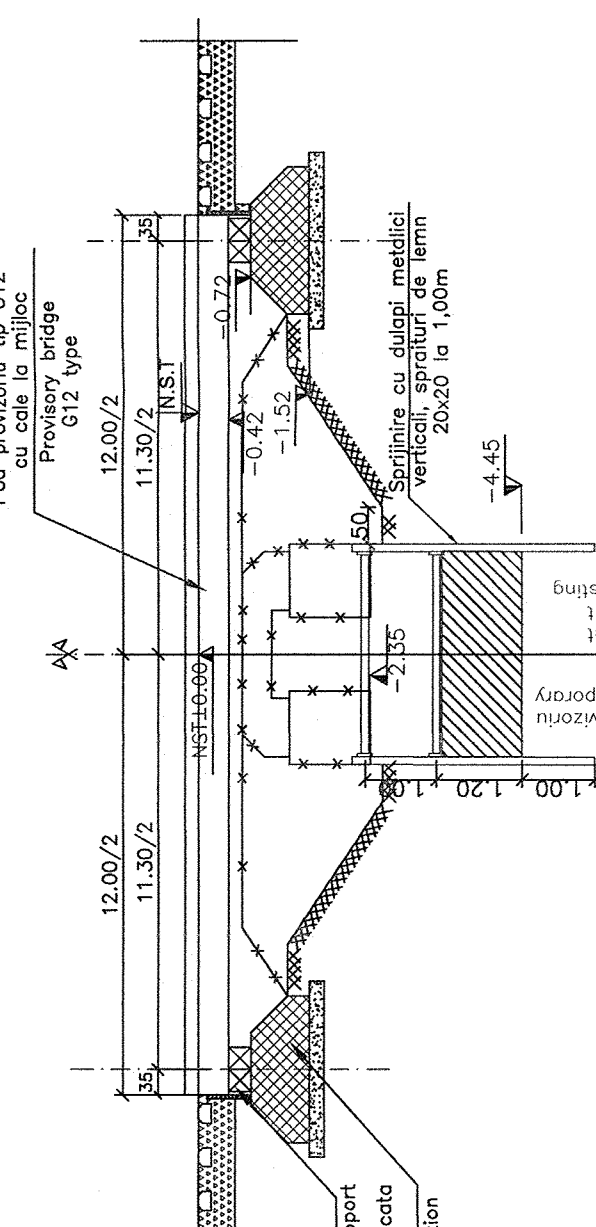
LUCRARI PRELIMINARE
 1. Sub-circulatie cu viteza fara restrictie de viteza;
 1.1. Lucrari de organizare de santier;
 - amenajarea drumului de acces de 130m lungime, cu 30cm balast dupa compactare;
 - realizarea umpluturii din material local pentru platformele tehnologice;
 - amenajarea stralutului, bucat sau retez de cur, in grosime de 30cm grosime dupa compactare, pentru platformele tehnologice;
 - amenajarea organizarii de santier;
 - aprovizionarea materialelor (balast, materiale pentru realizarea betonului sau beton, elementelor prefabricate, cofraje, material lemnos, otel beton, utilaje etc.);
 1.2. Lucrari pregatitoare;
 - identificarea instalatiilor feroviare de semnalizare si telefonie si eventualele retele existente in amplasamentul lucrarilor
 - curatenia taluzurilor de vegetatie si arbusi;
 - inlocuirea stralutului vegetal si depozitarea intr-un loc special amenajat in vederea refolosirii.
 - inlocuirea si oval in zona de directie de lucru si in zona Platformei tehnologice se vor realiza filtre aciculare pentru coborarea nivelului apei subterane din zona sapaturilor.

Inchiderea de linie cu scoatere de sub tensiune si desfacerea liniei de contact
 - se executa lucrari de protectie a instalatiilor existente in cale;
 - se demontaza si se scoate cadrul sira-traversa pe o lungime de aproximativ 20,00m avat pe podet (km 101+311);
 - se realizeaza sapaturile pe terasament pentru rezezele prefabricate si gabaritul (hc) pe verticala al podului provizoriu tip G12;
 - se introduce in cale podul provizoriu tip G12 si rezezele aferente cu ajutorul macaralei feroviare;
 - se scoate calea pe podul provizoriu cu sira existenta pe traversa din lemn;
 - se asigura continuitatea circuitelor de cale, electrozolairea sinelor si protectia electrica;
 - se remonteaza linia de contact, se pune sub tensiune si se deschide circulatia in trepte de viteza pana la $V_{max}=30km/h$ si se tine sub observatie podul provizoriu G12 pe toata durata de exploatare in cale, cu remedierea eventualelor defecte si aducerea lor in limita admisa de toleranta.

Preliminary works
 1. During traffic with no speed limit:
 1.1. Site organization works
 - setting the access road of 150m length, with 30 cm ballast, after compaction;
 - realizing the fillings of local material for technological platforms;
 - laying the ballast coating or ridding, with a thickness of 30cm after compaction, for technological platforms;
 - supply of materials (ballast, materials for concrete making or concrete, prefabricated elements, molds, wood material, steel concrete, machinery a.o.);
 1.2. Preliminary work:
 - identification of signaling and telephone railway installations existing in the emplacement of the working
 - cleaning the railway fills of vegetation and scrubs
 - cleaning the vegetable layer and depositing it in a place specially installed in order to be reutilized.
 - upstream and downstream outside the area affected by works and outside the technological platform acicular strainers will be realized in order to decrease the level of underground water in the digging area;

Line closing with detensioning and loosening the contact line:
 PHASE I:
 - works of protection of the installation existing in the track are executed;
 - the rail-cross bar frame is demounted and taken out on a length of approximately 20,00m centered on the culvert (km 101+311);
 - the digging on the bank are made for the prefabricated supports and the gauge (hc) on vertical of the temporary bridge type G12;
 - the temporary bridge type G12 and the related supports are introduced in the track with the help of the railway derrick;
 - the track is rebuilt on the temporary bridge with the existing rail on wood sleepers.
 - the continuity of the track circuits, the electric insulation and the electric protection are insured;
 - the contact line is remounted, put under tension and the traffic is opened in speed levels, until Max. Speed=30km/h and the temporary bridge G12 is kept under observation on the entire period of track operation, with the repair of contingent damages and their reduction to the permissible limits.

FAZA II



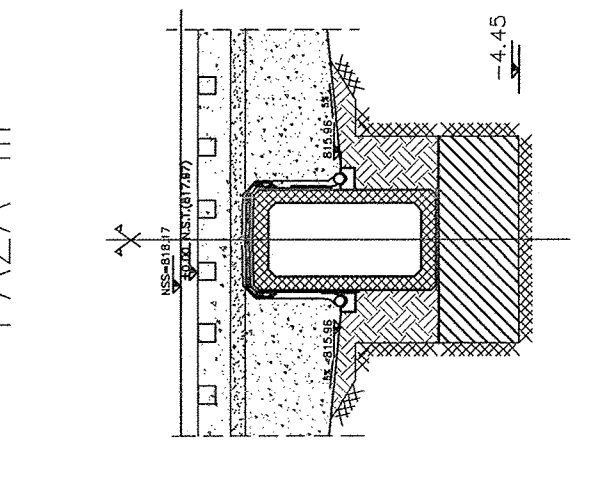
Pod provizoriu tip G12 cu cale la mijloc
 - se scoate de sub tensiune si se demonteaza pe zona oferenta podului provizoriu linia de contact;
 - toate lucrarile vor fi insozite de lucrarile specifice de protectie a instalatiilor din cale si vecinatate;
 - se demonteaza calea de pe podul provizoriu tip G12;
 - se scoate din cale, cu macaraua c.f. podul provizoriu G12 si fundatiile prefabricate ale acestuia;
 - se introduce cu macaraua c.f. cadrele si arpile prefabricate dinse amonte spre aval, si se trateaza rosturile dintre elementele prefabricate conform detaliilor de executie din proiect;
 - se executa umpluturile pana la nivelul drenurilor, in straturi succesive de 30 cm bine compactate;
 - se executa drenurile;
 - se completeaza umpluturile, in straturi succesive de 30 cm bine compactate, conform caietului de sarcini.
 - se reface terasamentul liniei c.f. la cotele finale;
 - se remonteaza linia de contact, se repune sub tensiune firul de contact, se reface circuitele de cale, si se redeschide circulatia in trepte de viteza conform instructiilor cf in vigoare.

Works executed in line closing with detensioning the contact line
 PHASE II:
 - all works will be accompanied by specific protection works of adjacent and track installations;
 - the track is demounted from the temporary bridge type G12;
 - the temporary bridge G12 and its prefabricated foundations are taken out of the track with the railway derrick;
 - the prefabricated frames and paddles are introduced with the railway derrick from upstream to downstream, and the joints between the prefabricated elements are treated according to the execution details in the project;
 - the fillings are executed up to the drain levels, in successive layers of 30 cm, well consolidated;
 - the drains are executed;
 - the fillings are completed, in successive layers of 30 cm well consolidated, according to the specification.
 - the bed of the rail track r. t. is rebuilt at the final quotes;
 - the tracks is rebuilt with the existing rail;
 - the contact line is remounted, the contact wire is put back under tension, the track circuits are redone, and the traffic is reopened in speed levels, according to the rt instructions in force.

Pod provizoriu tip G12 cu cale la mijloc
 - se scoate de sub tensiune si se demonteaza pe zona oferenta podului provizoriu linia de contact;
 - toate lucrarile vor fi insozite de lucrarile specifice de protectie a instalatiilor din cale si vecinatate;
 - se demonteaza calea de pe podul provizoriu tip G12;
 - se scoate din cale, cu macaraua c.f. podul provizoriu G12 si fundatiile prefabricate ale acestuia;
 - se introduce cu macaraua c.f. cadrele si arpile prefabricate dinse amonte spre aval, si se trateaza rosturile dintre elementele prefabricate conform detaliilor de executie din proiect;
 - se executa umpluturile pana la nivelul drenurilor, in straturi succesive de 30 cm bine compactate;
 - se executa drenurile;
 - se completeaza umpluturile, in straturi succesive de 30 cm bine compactate, conform caietului de sarcini.
 - se reface terasamentul liniei c.f. la cotele finale;
 - se remonteaza linia de contact, se repune sub tensiune firul de contact, se reface circuitele de cale, si se redeschide circulatia in trepte de viteza conform instructiilor cf in vigoare.

Works under traffic with speed limit 30 km/h:
 PHASE II:
 - the structure of the existing culvert is demounted;
 - the digging are executed with shore support in order to realize the foundation of the culvert, the foundation of the collecting room and foundations of the prefabricated paddles;
 - the transit of the waters in the culvert area is insured,
 - concrete is molded in order to execute the foundations;
 - the collecting room is executed upstream and the execution of the correction is started upstream.

FAZA III



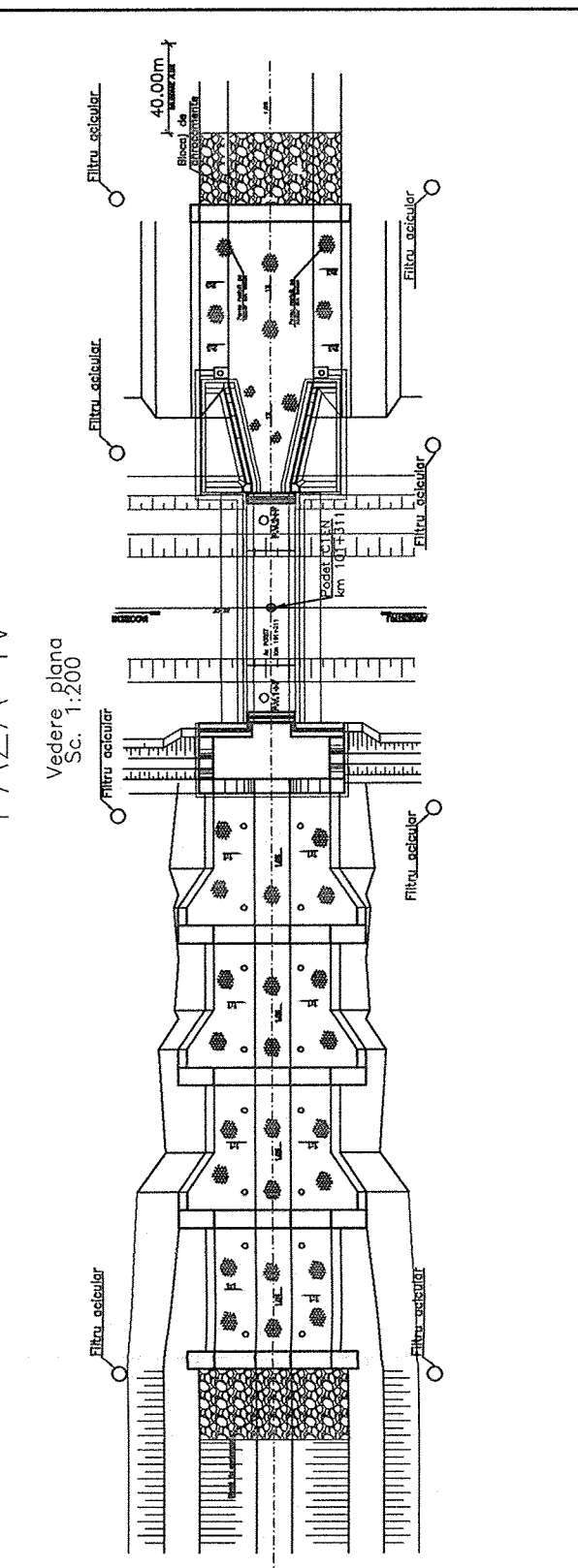
Lucrari executate in inchiderea de linie cu scoatere de sub tensiune a liniei de contact
 PHASE III:
 - se scoate de sub tensiune si se demonteaza pe zona oferenta podului provizoriu linia de contact;
 - toate lucrarile vor fi insozite de lucrarile specifice de protectie a instalatiilor din cale si vecinatate;
 - se demonteaza calea de pe podul provizoriu tip G12;
 - se scoate din cale, cu macaraua c.f. podul provizoriu G12 si fundatiile prefabricate ale acestuia;
 - se introduce cu macaraua c.f. cadrele si arpile prefabricate dinse amonte spre aval, si se trateaza rosturile dintre elementele prefabricate conform detaliilor de executie din proiect;
 - se executa umpluturile pana la nivelul drenurilor, in straturi succesive de 30 cm bine compactate;
 - se executa drenurile;
 - se completeaza umpluturile, in straturi succesive de 30 cm bine compactate, conform caietului de sarcini.
 - se reface terasamentul liniei c.f. la cotele finale;
 - se remonteaza linia de contact, se repune sub tensiune firul de contact, se reface circuitele de cale, si se redeschide circulatia in trepte de viteza conform instructiilor cf in vigoare.

Works executed in line closing with detensioning the contact line
 PHASE III:
 - all works will be accompanied by specific protection works of adjacent and track installations;
 - the track is demounted from the temporary bridge type G12;
 - the temporary bridge G12 and its prefabricated foundations are taken out of the track with the railway derrick;
 - the prefabricated frames and paddles are introduced with the railway derrick from upstream to downstream, and the joints between the prefabricated elements are treated according to the execution details in the project;
 - the fillings are executed up to the drain levels, in successive layers of 30 cm, well consolidated;
 - the drains are executed;
 - the fillings are completed, in successive layers of 30 cm well consolidated, according to the specification.
 - the bed of the rail track r. t. is rebuilt at the final quotes;
 - the tracks is rebuilt with the existing rail;
 - the contact line is remounted, the contact wire is put back under tension, the track circuits are redone, and the traffic is reopened in speed levels, according to the rt instructions in force.

Lucrari sub circulatie cu restrictie de viteza de 30 km/h:
 PHASE II:
 - se demoleaza structura podetului existent;
 - se executa sapaturile cu sprijiniri de maluri pentru realizarea fundatiei podetului, fundatiei camerei de colectare si fundatiilor arilor prefabricate;
 - se asigura tranzitarea apelor pe zona podetului;
 - se toarna betonul pentru executarea fundatiilor;
 - se executa camera de colectare amonte si se incepe executia corectiei amonte.

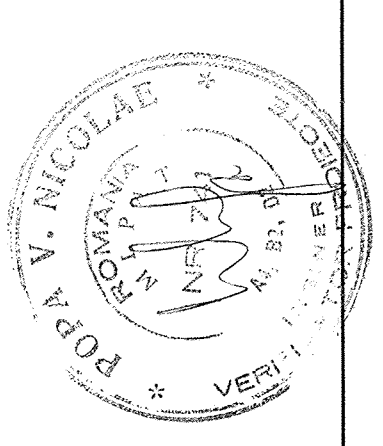
Works under traffic with speed limit 30 km/h:
 PHASE II:
 - the structure of the existing culvert is demounted;
 - the digging are executed with shore support in order to realize the foundation of the culvert, the foundation of the collecting room and foundations of the prefabricated paddles;
 - the transit of the waters in the culvert area is insured,
 - concrete is molded in order to execute the foundations;
 - the collecting room is executed upstream and the execution of the correction is started upstream.

FAZA IV



Lucrari executate sub circulatie cu viteza normala
 PHASE IV:
 - finalizarea amenajarii amonte
 - se monteaza scara si parapetii metalici.
 - se realizeaza umplutura in podet.
 - se executa podul in podet si intru arpi.
 - se realizeaza blocul de ancoamante.
 - profilarea abele in aval pana la emisor (raul Bistrita), L_{aprox}=40,0m.
 - se dezactiveaza platforma si accesul din zona de lucru.
Works executed under normal speed traffic:
 PHASE IV:
 - finalizing the upstream layout
 - the bridge and the metallic guard rails are mounted.
 - the fillings in the culvert is realized.
 - the parap in the culvert and between the paddles is realized.
 - the rock fill pitching is realized.
 - profiling the bed downstream until the emissary (Bistrita river), L_{aprox}=40,0m.
 - the platform and access from the working area are deallocated.

Works executed under normal speed traffic:
 PHASE IV:
 - finalizing the upstream layout
 - the bridge and the metallic guard rails are mounted.
 - the fillings in the culvert is realized.
 - the parap in the culvert and between the paddles is realized.
 - the rock fill pitching is realized.
 - profiling the bed downstream until the emissary (Bistrita river), L_{aprox}=40,0m.
 - the platform and access from the working area are deallocated.



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| B | | | |
| A | | | |
| BENEFICIAR/BENEFICIARY: | | ROMANIAN RAILWAY NATIONAL COMPANY Ministerul Transporturilor Ministry of Transport | |
| MODIFICARE | | Modificare Modification / Revision IMPLEMENTAREA DE IMPLEMENTARE/ IMPLEMENTING AUTHORITY | |
| CONTRACT/ | | CONTRACT/ CONTRACTANT/ CONTRACTING AUTHORITY CFU | |
| CONTRACT/ | | CONTRACT/ CONTRACTANT/ CONTRACTING AUTHORITY 13032007 | |
| FAZA/ | | Faza/ Phase/ PTN/DE PTH/DE TH/UD POS Transport 2007-2013 | |
| PORTOFOLIUL DE PROIECTE PHARE CES 2005 / PHARE CES 2005 PROJECTS PORTFOLIO | | PORTOFOLIUL DE PROIECTE PHARE CES 2005 / PHARE CES 2005 PROJECTS PORTFOLIO LOT 101+311 Asistenta tehnica pentru pregatirea lucrului de reabilitare pentru tunelul si podul de cale ferata Technical assistance for preparing rehabilitation works required by railway tunnels and bridges | |
| Denumirea desen / Drawing Title | | Denumirea desen / Drawing Title Podet / Culvert km 101+311 | |
| Data / Date | | Data / Date 05.2009 | |
| Scara / Scale | | Scara / Scale 1:100 | |
| Verificat / Checked | | Verificat / Checked Ing. Razvan Sterie | |
| Sef echipa / Team leader | | Sef echipa / Team leader Ing. Ioan Dachin | |
| Categorie / Category | | Categorie / Category PT 241 | |
| Cod desen / Drawing Code | | Cod desen / Drawing Code PT 241 | |
| TEHNOLOGIA DE EXECUTIE/EXECUTION TECHNOLOGY | | Tehnologia de executie / Execution Technology PT 241 | |