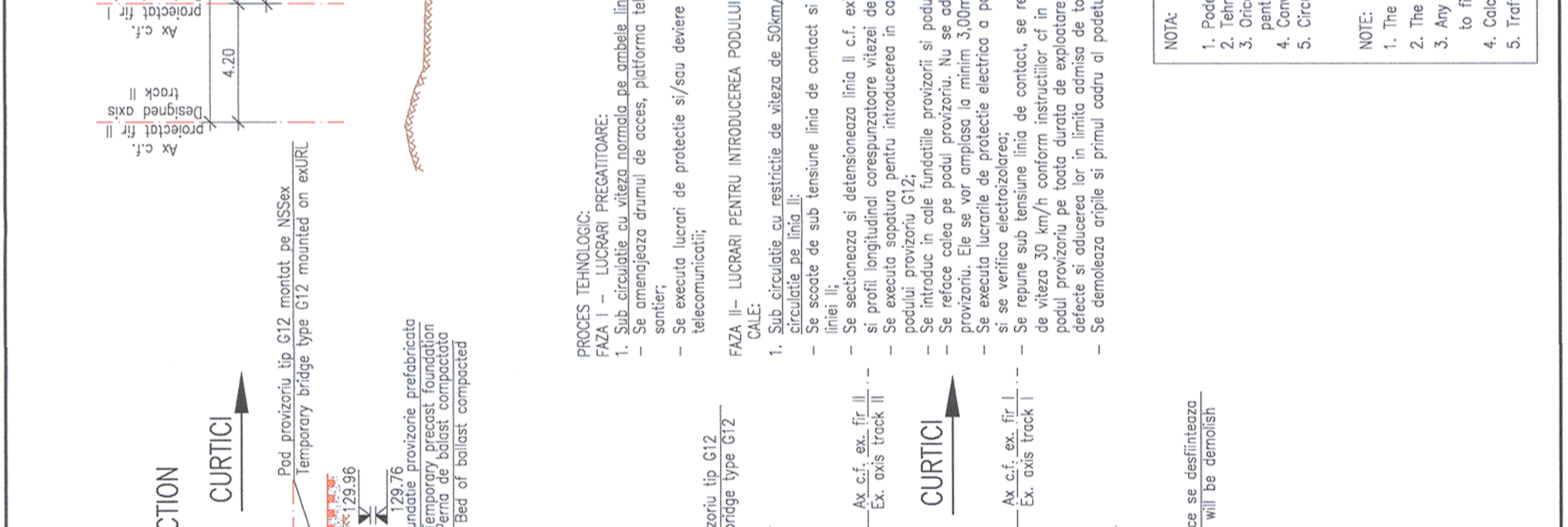
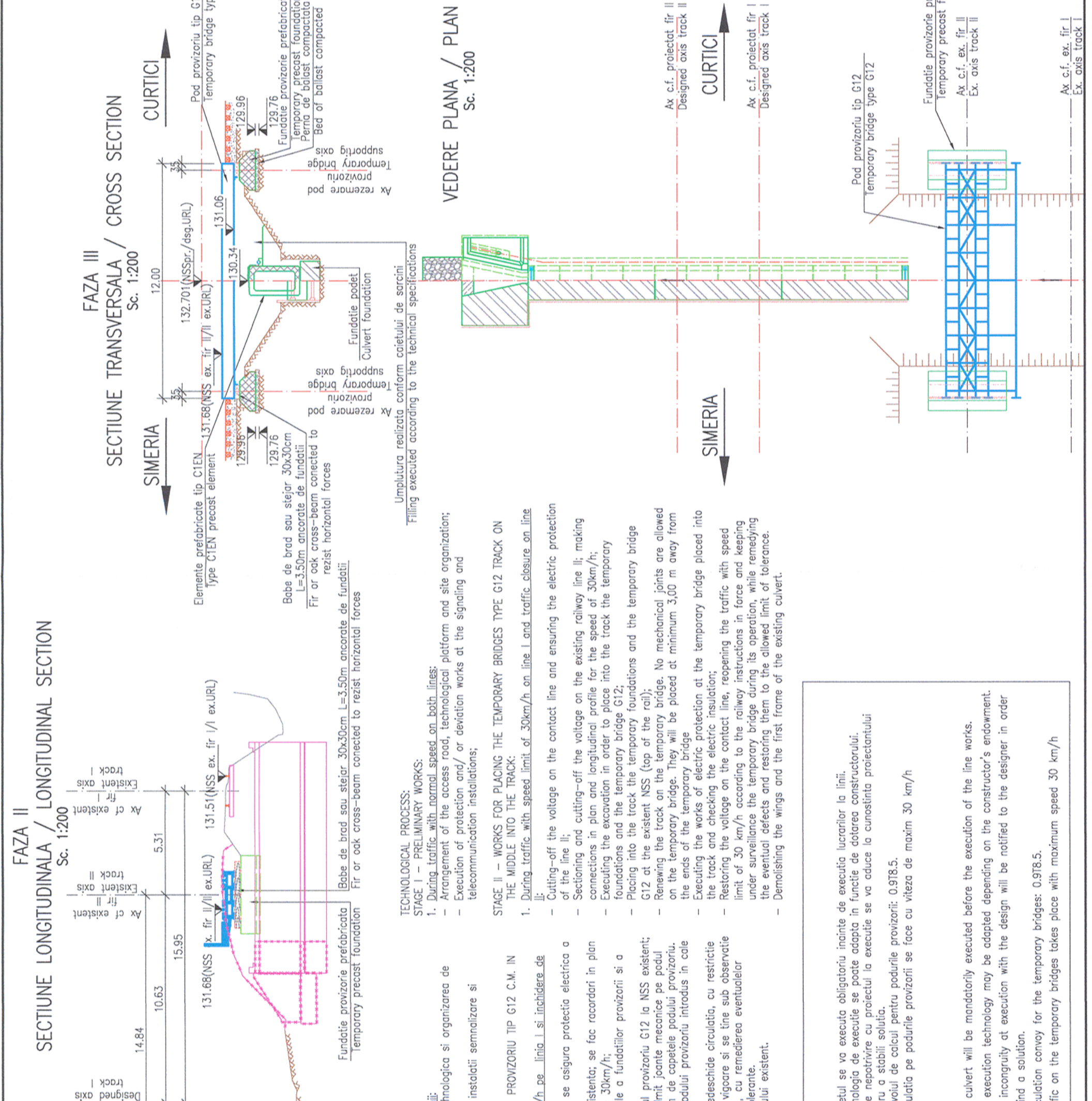
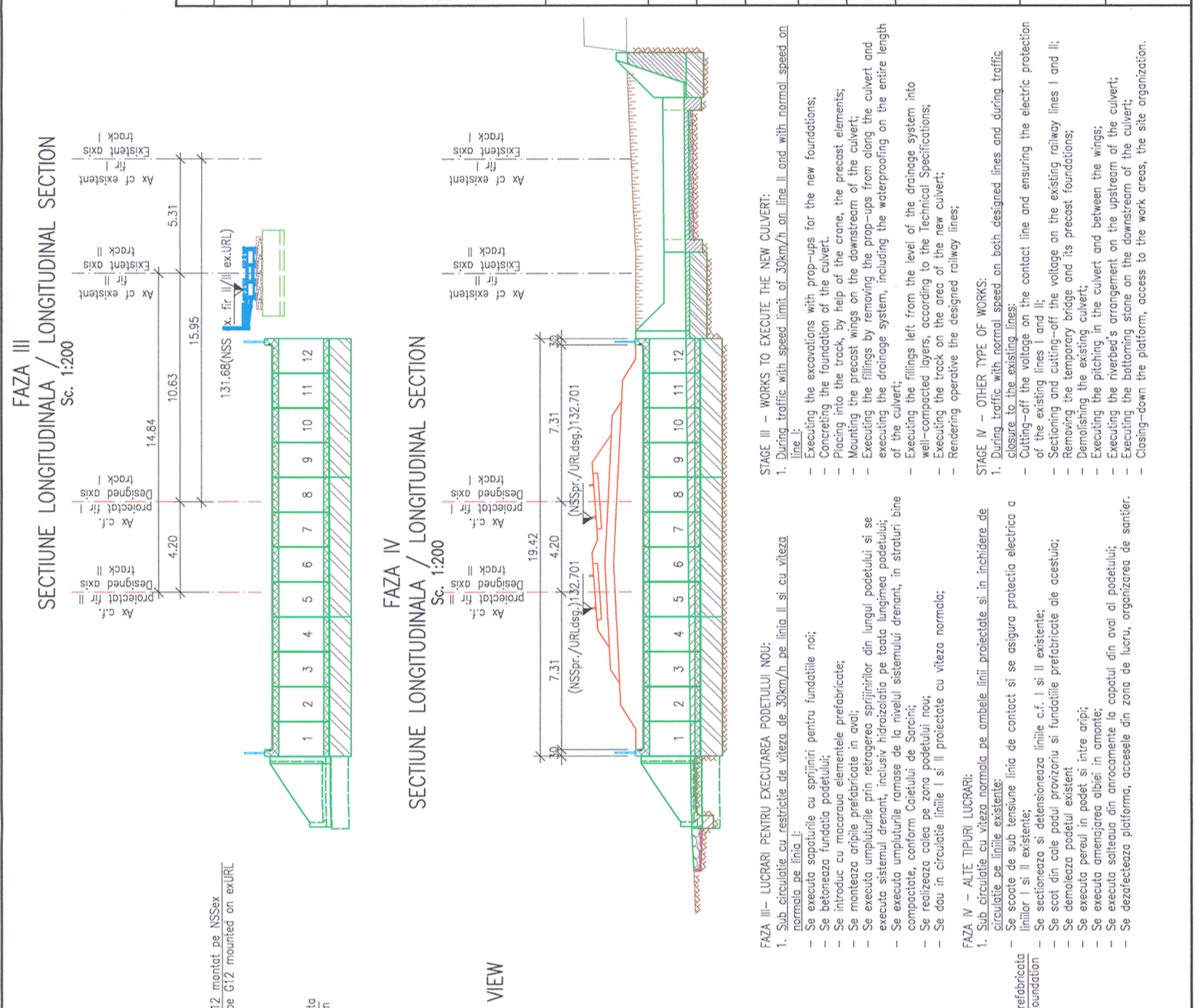


<p style="text-align: center;">FAZA III</p> <p style="text-align: center;">SECTIUNE LONGITUDINALA / LONGITUDINAL SECTION</p> <p style="text-align: center;">Sc. 1:200</p>					
<p style="text-align: center;">FAZA II</p> <p style="text-align: center;">SECTIUNE LONGITUDINALA / LONGITUDINAL SECTION</p> <p style="text-align: center;">Sc. 1:200</p>					
<p style="text-align: center;">FAZA IV</p> <p style="text-align: center;">SECTIUNE LONGITUDINALA / LONGITUDINAL SECTION</p> <p style="text-align: center;">Sc. 1:200</p>					
<p style="text-align: center;">FAZA III - CURTICI</p> <p style="text-align: center;">SECTIUNE TRANSVERSALA / CROSS SECTION</p> <p style="text-align: center;">Sc. 1:200</p>					
<p style="text-align: center;">FAZA II - SIMERIA</p> <p style="text-align: center;">SECTIUNE TRANSVERSALA / CROSS SECTION</p> <p style="text-align: center;">Sc. 1:200</p>					
<p style="text-align: center;">FAZA III - CURTICI</p> <p style="text-align: center;">VEDERE PLANA / PLAN VIEW</p> <p style="text-align: center;">Sc. 1:200</p>					
<p style="text-align: center;">FAZA II - SIMERIA</p> <p style="text-align: center;">VEDERE PLANA / PLAN VIEW</p> <p style="text-align: center;">Sc. 1:200</p>					
<p style="text-align: center;">FAZA III - CURTICI</p> <p style="text-align: center;">VEDERE PLANA / PLAN VIEW</p> <p style="text-align: center;">Sc. 1:200</p>					



PROCES TECHNOLOGIC:

FAZA I - LUCRARI PREGATOARE:

- Subcirculatie cu viteza normala pe ambele linii:
- Aranjarea de acces, platforma tehnologica si organizarea de santier;
- Executarea lucrarilor de protectie si/sau deversare instalatii si telecomunicatii;

FAZA II - LUCRARI INTRODUCEREA PODULUI PROVIZORIU TIP G12 C.M. IN CALE:

- Subcirculatie cu restrictie de viteza de 50km/h pe linia I si inchiderea de circulatie pe linia II;
- Se scoate de sub tensiune linia de contact si se asigura protectia electrica a liniei II;
- Se sectioneaza si detensioneaza linia c.f. existenta; se fac racorduri in plan si profil longitudinal corespunzatoare vitezei de 30km/h;
- Se executa sapaturile pentru introducerea in cale a fundatiilor provizorii si a podului provizoriu G12;
- Se introduce in cale fundatiile provizorii si podul provizoriu G12 la NSS existent; Se realizeaza calea pe podul provizoriu. Nu se admit joante mecanice pe podul provizoriu. Ele se vor amplasa la minim 3,00m de capetele podului provizoriu, si se verifica electroizolarea;
- Se reune sub tensiune linia de contact, se reschideze circulatia, cu restrictie de viteza 30 km/h conform instructiilor c.f. in vigoare si se pune sub observatie podul provizoriu pe toata durata de exploatare, cu remedierea eventualelor defecte si aducerea lor in limita admisa de tolerante;
- Se demoleaza aripile si primul cadru al podului existent.

FAZA III - LUCRARI PENTRU EXECUTAREA PODULUI NOU:

- Subcirculatie cu restrictie de viteza de 30km/h pe linia II si cu viteza normala pe linia I;
- Se executa sapaturile cu sprijiniri pentru fundatiile noi;
- Se betonizeaza fundatiile noi;
- Se introduce in cale aripile prefabricate in oval;
- Se monteaza aripile prefabricate in oval;
- Se executa umplutura prin retrogradarea sprijinilor din lungul podului si se executa sistemul drenant, inclusiv hidroizolatia pe toata lungimea podului;
- Se executa umplutura ramasa de la nivelul sistemului drenant, in straturi bine compactate, conform Caietului de Sarcini;
- Se realizeaza calea pe zona podului nou;
- Se dau in circulatie linia I si II protectate cu viteza normala;

FAZA IV - ALTE TIPURI LUCRARI:

- Subcirculatie cu viteza normala pe ambele linii protectate si in inchiderea de circulatie pe linia existenta;
- Se scoate de sub tensiune linia de contact si se asigura protectia electrica a liniei I si II existente;
- Se sectioneaza si detensioneaza linie c.f. I si II existente;
- Se scot din cale podul provizoriu si fundatiile prefabricate ale acestuia;
- Se demoleaza podul existent;
- Se executa perul in podet si intru arpi;
- Se executa amenajarea albiei in amonte;
- Se executa salteaua din arnoamamente la capatul din aval al podului;
- Se dezalcateaza platforma, accesul din zona de lucru, organizarea de santier.

TEHNOLOGICAL PROCESS:

STAGE I - PRELIMINARY WORKS:

- 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 BRIDGES TYPE G12 TRACK ON THE MIDDLE INTO THE TRACK:

- 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; making connections in plan and longitudinal profile for the speed of 30km/h;
- Executing the excavation in order to place into the track the temporary foundations and the temporary bridge G12;
- Placing into the track the temporary foundations and the temporary bridge G12 at the existent NSS (top 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 temporary bridge;
- Executing the works of electric protection at the temporary bridge placed into the track and checking 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;
- Demolishing the wings and the first frame of the existing culvert.

STAGE III - WORKS TO EXECUTE THE NEW CULVERT:

- During traffic with speed limit of 30km/h on line II and with normal speed on line I:
- Executing the excavations with prop-ups for the new foundations;
- Concrete the foundation of the culvert;
- Placing into the track, by help of the crane, the precast elements;
- Mounting the precast wings on the downstream of the culvert;
- Executing the fillings by removing the prop-ups 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;
- Executing the track on the area of the new culvert;
- Returning operative the designed railway lines;

STAGE IV - OTHER TYPE OF WORKS:

- During traffic with normal speed on both designed lines and during traffic closure to the existing lines:
- Cutting-off the voltage on the contact line and ensuring the electric protection of the existing lines I and II;
- Sectioning and cutting-off the voltage on the existing railway lines I and II;
- Removing the temporary bridge and its precast foundations;
- Demolishing the existing culvert;
- Executing the pitching in the culvert and between the wings;
- Executing the riverbed's arrangement on the upstream of the culvert;
- Executing the bottoming stone on the downstream of the culvert;
- Closing-down the platform, access to the work areas, the site organization.

NOTA:

- Podetii se va executa obligatoriu inainte de executia lucrarilor la linia.
- Tehnologia de executie se poate adapta in functie de dotarea constructiilor.
- Orice nepotrivire cu proiectul la executie se va duce la cunoastinta proiectantului pentru a stabili solutia.
- Convoiu de calori pentru podurile provizorii se face cu viteza de maxim 30 km/h
- Circulatia pe podurile provizorii se face cu viteza de maxim 30 km/h

NOTE:

- The culvert will be mandatorily executed before the execution of the line works.
- The execution technology may be adapted depending on the constructor's endowment.
- Any incongruity at execution with the design will be notified to the designer in order to find a solution.
- Calculation convey for the temporary bridges: 0.978.5.
- Traffic on the temporary bridges takes place with maximum speed 30 km/h

<p style="text-align: center;">PROIECTANT / DESIGNER:</p> <p style="text-align: center;">PÖYRY</p>		<p style="text-align: center;">Data Date</p> <p style="text-align: center;">01.2013</p>		<p style="text-align: center;">Semnatura Signature</p> <p style="text-align: center;">C. Teodorescu</p>	
<p style="text-align: center;">Verificator / Expert Checker / Expert</p> <p style="text-align: center;">European Investment Bank</p>		<p style="text-align: center;">Ceinta Requirement</p> <p style="text-align: center;">MINISTERUL TRANSPORTURILOR</p>		<p style="text-align: center;">Referat / Expertiza Report / Expertise</p> <p style="text-align: center;">ROMANIA VERIFICATOR P.F.P.E.C.T. K.T.P.A.T. N. 44.82.02 VERIFICATOR P.F.P.E.C.T.</p>	
<p style="text-align: center;">BENEFICIAR / BENEFICIARY :</p> <p style="text-align: center;">COMPANIA NATIONALA DE CAI FERATE "CFR" SA</p>		<p style="text-align: center;">Subcontractant / Subcontractor</p> <p style="text-align: center;">VIOTOP</p>		<p style="text-align: center;">Verificat / Expert Cheie Key Expert</p> <p style="text-align: center;">R. Tudorascu</p>	
<p style="text-align: center;">Aprobat / Approved</p> <p style="text-align: center;">Sef de echipa Team leader</p> <p style="text-align: center;">C. Teodorescu</p>		<p style="text-align: center;">Verificat / Checked</p> <p style="text-align: center;">Expert Cheie Key Expert</p> <p style="text-align: center;">R. Tudorascu</p>		<p style="text-align: center;">Aprobat / Approved</p> <p style="text-align: center;">Adjunct Sef de echipa Deputy Team leader</p> <p style="text-align: center;">A.M. Baicu</p>	
<p style="text-align: center;">Proiectat / Designed</p> <p style="text-align: center;">Inginer Engineer</p> <p style="text-align: center;">D. Stanciu</p>		<p style="text-align: center;">Data Date</p> <p style="text-align: center;">01.2013</p>		<p style="text-align: center;">Semnatura Signature</p> <p style="text-align: center;">D. Stanciu</p>	

TEHNOLOGIE DE EXECUTIE / EXECUTION TECHNOLOGY
PODET / CULVERT KM pr. 588+444 (KM ex. 591+764)

Denumire desen / Drawing name:

"Reabilitarea liniei c.f. Curtici - Simeria, parte componentă a coridorului IV
Pan - European pentru circulatia trenurilor cu viteza maxima de 160 km/h"
"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 Bărzava

Project 91
35311.1
Faza / Phase:
PTH-CS / TD-TS

Scara / Scale
1:200

Revizia / Revision
1 / 04.2013

Cod desen / Drawing Code
PT.02.02.07.PO.07.04

Nr / No
04