

**SECTIUNE LONGITUDINALA A-A / A-A LONGITUDINAL SECTION**  
Sc. 1:100

**VEDERE B-B / B-B VIEW**  
Sc. 1:100

**SECTIUNE C-C / C-C SECTION**  
Sc. 1:100

**SECTIUNE D-D / D-D SECTION**  
Sc. 1:100

**SECTIUNE E-E / E-E SECTION**  
Sc. 1:100

**SECTIUNE F-F / F-F SECTION**  
Sc. 1:100

**VEDERE PLANA SI PLANUL FUNDATIILOR / PLAN VIEW AND FOUNDATIONS PLAN**  
Sc. 1:100

**LEGENDA BETOANELOR/CONCRETE LEGEND**  
conform NE 012-1:2007/SR EN 206-1

- BETON C35/45 - Clasa de expunere XC4+XD1+XF3, agregate D<sub>max</sub> 22
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- BETON C25/30 - Clasa de expunere XC2+XF1+XA1, agregate D<sub>max</sub> 22. FUNDATII DIRECTE SI FUNDATII PREFABRICATE/ DIRECT FOUNDATIONS AND TEMPORARY FOUNDATIONS
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- BETON C16/20 - Clasa de expunere X0+XF3, agregate D<sub>max</sub> 16. DREN, BETON DE PANZA, DE EGALIZARE DRAINAGE, SLOPE, LEAN CONCRETE

**NOTA:**

- Prezentul plan s-a intocmit in baza urmatoarelor date:
  - studiu topografic;
  - studiu geotehnic;
  - studiu hidrologic;
  - expertiza podetului;
  - date culese pe teren
- Pentru asigurarea scurgerii apelor pe zona traseului cf nou proiectat se urmatoarele lucrari:
  - se va executa un podet nou cf tip CZEN;
  - racordarea podetului nou cu terasamentele va fi asigurata in aval cu un zid de sprinjin si in amonte cu o camera de colectare a apelor;
  - se vor impermeabiliza suprafețele de beton vizibile;
  - se prevede parapet metalic pe timpul podetului, pe zidul de sprinjin si pe camera de colectare a apelor;
  - se prevede scara de acces pe terasament la capatul din aval al podetului; se prevede scara de acces in camera de colectare a apelor;
  - se va amenaja abia in interiorul podetului si in camera de colectare a apelor cu peruu de beton;
  - saltea de 5.00m lungime, din piatra bruta la capatul din aval al podetului;
  - in aval se va racorda la abia naturala; in amonte se calbreaza si se protejeaza abia pe o lungime de aproximativ 11.30m;
  - la turnarea betonului in fundatii, se vor realiza rosturi totale. Resturile din fundatii se vor supraguna rosturilor intre cadrele prefabricate minimum din trei in trei cadre.
  - La executie se vor respecta cu strictete prevederile din SR EN 206-1, NE 012-1:2007, NE 012-2:2010, NE013/2002, si C56-85 (C56-2002) si a Caietului de Sarcini.
  - Conform H.C. 766/1997 lucrarea se incadreaza in categoria "B" a constructiilor de importanta deosebita.
  - Proiectul va fi verificat de verificatori atestati MLPAT la exigentele A4, B2 si D.2.

**NOTE:**

- This plan was prepared based on the following data:
  - topographic study;
  - geotechnical study;
  - hydraulic study;
  - expertise of the culvert;
  - data collected on site.
- In order to ensure the water discharge on the area of the new railway designed route, the following works will be executed:
  - the execution of a new railway culvert type CZEN;
  - the connection of the new culvert with the embankments will be carried out downstream by help of a retaining wall and upstream by help of a waters' collecting chamber;
  - the visible surfaces of concrete will be waterproofed;
  - metallic handrail is provided at the tympan of the culvert, on the retaining wall and on the waters' collecting chamber;
  - access stairs are provided on the embankment on downstream and into the waters' collecting chamber on upstream of the culvert;
  - the riverbed will be arranged inside the culvert and inside the waters' collecting chamber with concrete pitching;
  - 5.00m long mattress, made of rough stone at the downstream of the culvert; the natural riverbed will be connected downstream to the existing situation; on upstream the riverbed will be calibrated on a length of approximately 11.30m;
  - when casting the concrete in the foundations, total joints will be executed. The joints in the foundations will be overlapped with the joints between the precast frames at least every three frames.
  - When executing, there will be strictly observed the provisions of SR EN 206-1, NE 012-1:2007, NE 012-2:2010, NE013/2002, C56-85 and of the Technical Specifications.
  - Complying with H.G. 766/1997 this structure belongs to category "B" of importance.
  - The project will be verified at A.4, B.2 and D.2 requirements.

**FISA FORAJULUI F1**  
**SHEET OF DRILLING F1**  
km 590+195

1:32.33(NSSe, fir I)  
1:32.73(NSSe, fir I)

Sol vegetal / Vegetal soil  
Nisip gros, granulometrie uniforma  
Dusty sand even granularity  
Pietris si nisip, granulometrie neuniforma  
Gravel and sand, uneven granularity

Umpulura realizata conform calculului de scari  
Filling executed according to the technical specifications

Sant beton conform proiect Terasamentele executate conform proiect  
Embankment project

PLANURI DETALII GENERALE / GENERAL DRAWING DETAILS

ACOPERIRE ROSTURI ELEMENTE PREFABRICATE JOINTS COVERING PRECAST ELEMENTS	P	T	0	3	0	2	0	0	0	1
HIDROIZOLATIE SI SISTEM DE DRENARE PODETE WATERPROOFING AND DRAINAGE SYSTEM CULVERTS	P <td>T <td>0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>2</td> </td></td></td></td></td></td></td></td>	T <td>0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>2</td> </td></td></td></td></td></td></td>	0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>2</td> </td></td></td></td></td></td>	3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>2</td> </td></td></td></td></td>	0 <td>2 <td>0 <td>0 <td>0 <td>2</td> </td></td></td></td>	2 <td>0 <td>0 <td>0 <td>2</td> </td></td></td>	0 <td>0 <td>0 <td>2</td> </td></td>	0 <td>0 <td>2</td> </td>	0 <td>2</td>	2
PARAPET METALIC PODETE METALLIC HANDRAIL CULVERTS	P <td>T <td>0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td></td></td></td></td></td>	T <td>0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td></td></td></td></td>	0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td></td></td></td>	3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td></td></td>	0 <td>2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td></td>	2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td>	0 <td>0 <td>0 <td>3</td> </td></td>	0 <td>0 <td>3</td> </td>	0 <td>3</td>	3
PLAN COFRAJ CADRU TIP CZEN_m SHUTTERING PLAN FRAME TYPE CZEN_m	P <td>T <td>0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>9</td> </td></td></td></td></td></td></td></td>	T <td>0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>9</td> </td></td></td></td></td></td></td>	0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>9</td> </td></td></td></td></td></td>	3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>9</td> </td></td></td></td></td>	0 <td>2 <td>0 <td>0 <td>0 <td>9</td> </td></td></td></td>	2 <td>0 <td>0 <td>0 <td>9</td> </td></td></td>	0 <td>0 <td>0 <td>9</td> </td></td>	0 <td>0 <td>9</td> </td>	0 <td>9</td>	9
PLAN COFRAJ CADRU TIP CZEN_LF SHUTTERING PLAN FRAME TYPE CZEN_LF	P <td>T <td>0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>1</td> </td></td></td></td></td></td></td></td>	T <td>0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>1</td> </td></td></td></td></td></td></td>	0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>1</td> </td></td></td></td></td></td>	3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>1</td> </td></td></td></td></td>	0 <td>2 <td>0 <td>0 <td>0 <td>1</td> </td></td></td></td>	2 <td>0 <td>0 <td>0 <td>1</td> </td></td></td>	0 <td>0 <td>0 <td>1</td> </td></td>	0 <td>0 <td>1</td> </td>	0 <td>1</td>	1
FUNDATIE PREFABRICATA PENTRU PODURI PROVIZORII SI DETALII PREFABRICATED FOUNDATION FOR TEMPORARY BRIDGES AND PROPPING-UP DETAILS FOR TEMPORARY BRIDGES	P <td>T <td>0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td></td></td></td></td></td>	T <td>0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td></td></td></td></td>	0 <td>3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td></td></td></td>	3 <td>0 <td>2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td></td></td>	0 <td>2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td></td>	2 <td>0 <td>0 <td>0 <td>3</td> </td></td></td>	0 <td>0 <td>0 <td>3</td> </td></td>	0 <td>0 <td>3</td> </td>	0 <td>3</td>	3

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**CONVOI DE CALCUL LM71**  
CALCULATION CONVOY LM71

**PROIECTANT / DESIGNER:**  
**PÖYRY**

**PROIECTANT / SUBCONTRACTOR:**  
**VIOTOP**

**APROBAT / APPROVED:**  
Sef de echipa / Team leader: C. Teodorescu  
Verificat / Checked: Expert Cheie / Key Expert: R. Tudorascu

**SEMNTURA / SIGNATURE:**  
C. Teodorescu  
R. Tudorascu

**DATA / DATE:**  
01-2013  
01-2013

**PROIECTUL ANULEAZA SI INLOCUIESTE VERSIUNEA ANTERIOARA / THIS PLAN CANCELS AND REPLACES PREVIOUS VERSION**

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