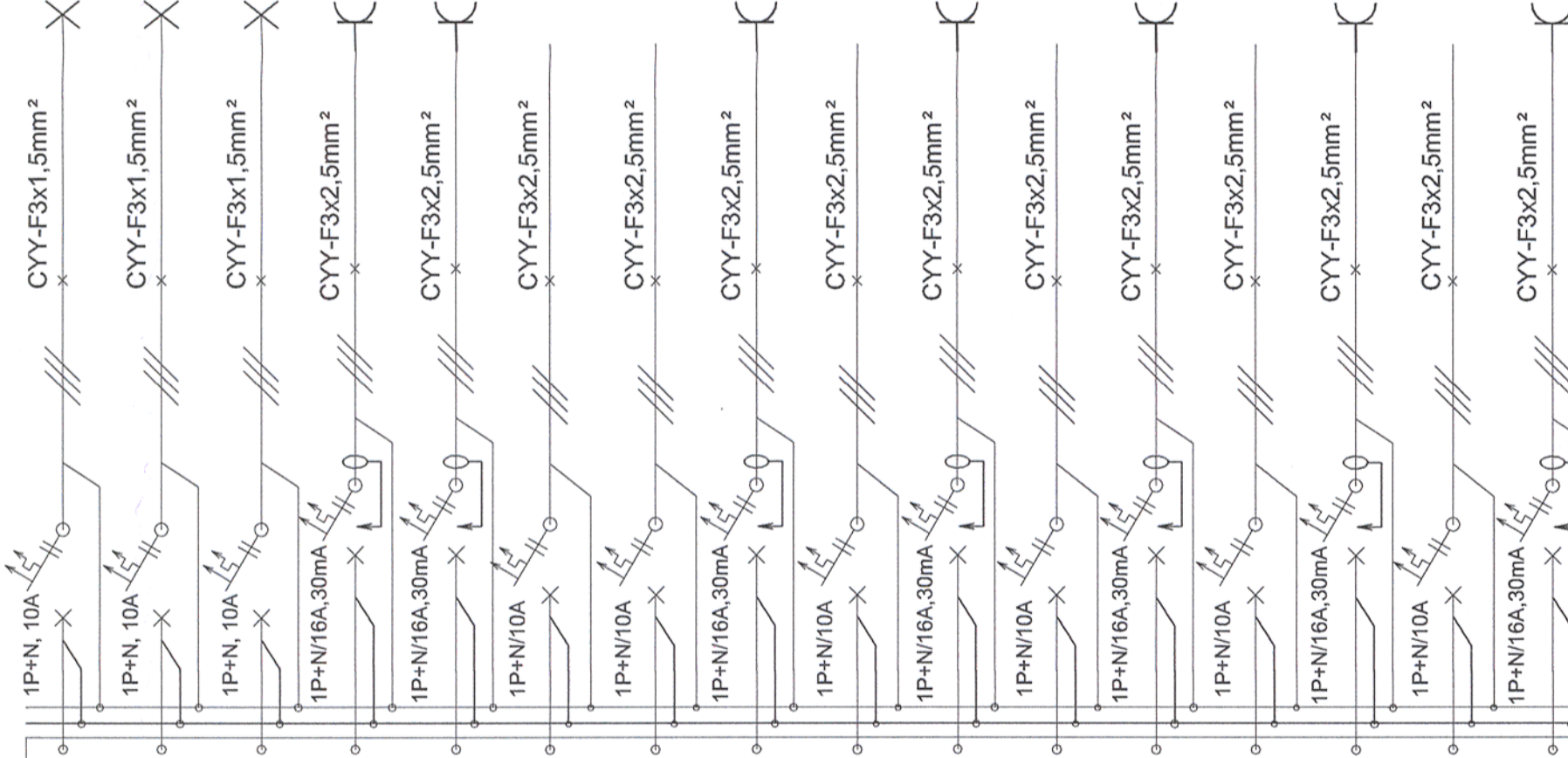


SCHEMĂ MONOFILARĂ TABLOU ELECTRIC GENERAL DE DISTRIBUȚIE MONOFILAR ELECTRICAL SCHEME FOR ELECTRIC PANEL

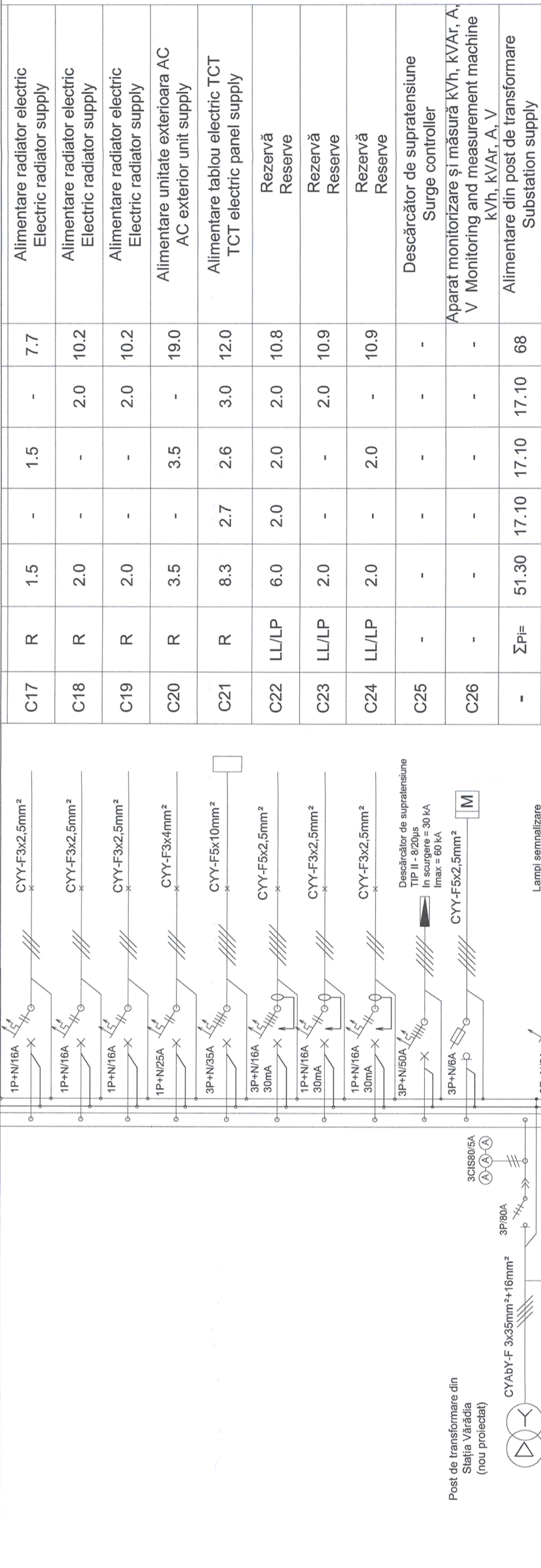
PI = 51,3 kW  
Pa = 38,5 kW  
Ic = 68,0 A

Un = 400 V.c.a  
CosØ = 0,82  
Cs = 0,75

TGD



| Circ. | Nr. rec. LL/LP | Pi [kW] | L1  | L2  | Pi [kW] | L3 | Ic   | Observații/ Observations  |
|-------|----------------|---------|-----|-----|---------|----|------|---|
|       |                |         |     |     |         |    |      |   |
| C1    | 10LL+ 2EXIT    | 0.9     | 0.9 | -   | -       | -  | 4.1  | Iluminat birou șef stație<br>Head office station lighting                                       |
| C2    | 10LL+ 2EXIT    | 1.0     | -   | 1.0 | -       | -  | 4.6  | Iluminat grupuri sanitare mixte<br>Mixed rest rooms lighting                                    |
| C3    | 6LL+ 3EXIT     | 0.6     | -   | -   | 0.6     | -  | 2.7  | Iluminat spațiu tehnic, grup sanitar, vestiar<br>Lights technical space, rest room, locker room |
| C4    | 3LP            | 2.0     | 2.0 | -   | -       | -  | 10.9 | Prize birou șef stație<br>Head office station sockets   |
| C5    | 3LP            | 2.0     | -   | 2.0 | -       | -  | 10.9 | Prize birou șef stație<br>Head office station sockets   |
| C6    | R              | 1.0     | 1.0 | -   | -       | -  | 5.1  | Alimentare radiator electric<br>Electric radiator supply  |
| C7    | R              | 1.0     | -   | -   | 1.0     | -  | 5.1  | Alimentare radiator electric<br>Electric radiator supply  |
| C8    | 1LP            | 2.5     | -   | -   | 2.5     | -  | 13.6 | Alimentare uscător de mâini<br>Hand dryer supply  |
| C9    | R              | 0.5     | 0.5 | -   | -       | -  | 2.6  | Alimentare radiator electric<br>Electric radiator supply  |
| C10   | 1LP            | 2.5     | 2.5 | -   | -       | -  | 13.6 | Alimentare uscător de mâini<br>Hand dryer supply  |
| C11   | R              | 1.0     | 1.0 | -   | -       | -  | 5.1  | Alimentare radiator electric<br>Electric radiator supply  |
| C12   | 1LP            | 2.5     | -   | 2.5 | -       | -  | 13.6 | Alimentare uscător de mâini<br>Hand dryer supply  |
| C13   | R              | 1.0     | 1.0 | -   | -       | -  | 5.1  | Alimentare radiator electric<br>Electric radiator supply  |
| C14   | 2LP            | 2.0     | -   | -   | 2.0     | -  | 10.9 | Prize vestiar și casă bilete<br>Locker room and tickets stand sockets                           |
| C15   | R              | 1.0     | 1.0 | -   | -       | -  | 5.1  | Alimentare radiator electric<br>Electric radiator supply  |
| C16   | 1LP            | 2.5     | 2.5 | -   | -       | -  | 13.6 | Alimentare uscător de mâini<br>Hand dryer supply  |



| C17 | R     | 1.5 | -   | 1.5 | -   | 7.7  | Alimentare radiator electric<br>Electric radiator supply                              |
|-----|-------|-----|-----|-----|-----|------|---|
| C18 | R     | 2.0 | -   | 2.0 | -   | 10.2 | Alimentare radiator electric<br>Electric radiator supply                              |
| C19 | R     | 2.0 | -   | 2.0 | -   | 10.2 | Alimentare radiator electric<br>Electric radiator supply                              |
| C20 | R     | 3.5 | -   | 3.5 | -   | 19.0 | Alimentare unitate exteriora AC<br>AC exterior unit supply                            |
| C21 | R     | 8.3 | 2.7 | 2.6 | 3.0 | 12.0 | Alimentare tablou electric TCT<br>TCT electric panel supply                           |
| C22 | LL/LP | 6.0 | 2.0 | 2.0 | 2.0 | 10.8 | Rezervă<br>Reserve  |
| C23 | LL/LP | 2.0 | -   | 2.0 | 2.0 | 10.9 | Rezervă<br>Reserve  |
| C24 | LL/LP | 2.0 | -   | 2.0 | -   | 10.9 | Rezervă<br>Reserve  |
| C25 | -     | -   | -   | -   | -   | -    | Descărcător de supratensiune<br>Surge controller                                      |
| C26 | -     | -   | -   | -   | -   | -    | Aparat monitorizare și măsură KVh, KVAh, A, V<br>V Monitoring and measurement machine |

| PROIECTANT / DESIGNER:  |   | Semnătura<br>Signature           |         |
|---|---|----------------------------------|---------|
| Aprobat<br>Approved   | Șef de echipă<br>Team leader                | C. Teodorescu                    | 01.2013 |
| Verificat<br>Checked  | Expert Cheie<br>Key Expert                  | D.A. Stănescu                    | 01.2013 |
| Subcontractant / Subcontractor  |   | Miotop                           |         |
| Aprobat<br>Approved   | Adjunct Șef de echipă<br>Deputy team leader | A.M. Balcu                       | 01.2013 |
| Proiectat<br>Designed   | Inginer<br>Engineer                         | M. Ciocirăan                     | 01.2013 |
| "Reabilitarea liniei c.t.f. Frontieră - Simeria, parte componentă a coridorului IV Pan - European pentru circulația trenurilor cu viteză maximă de 160 km/h"    |   | Proiect 91<br>35371.1            |         |
| "Rehabilitation of the Railway Line: Borci - Simeria, component part of the IV Pan - European Corridor for high speed rail with a maximum speed of 160 km/h"    |   | Faza / Phase:<br>P1Th+CS / TD+TS |         |
| Denumire desen / Drawing name:<br>Schemă monofilară tablou electric TGD - Stația Vărădia<br>Vărădia Station - Monofil electrical scheme for electric pan el TGD |   |                                  |         |
| Scara / Scale   | Revizia / Revision                          | Cod desen / Drawing Code         | Nr / No |
| -   | 1/05.2013                                   | PT.2B.04.12.IE.05.005            | 05/06   |

**LEGENDĂ / LEGEND:**

3P+N  
Automatic switcher with thermal and electro-magnetic protection;  
Automatic switcher with thermal and electro-magnetic protection;  
Automatic switcher with thermal and electro-magnetic protection;  
Automatic switcher with thermal and electro-magnetic protection;

Lămpi semnalizare  
Lamps for voltage warning for each phase;

1P+N  
Automatic switcher with thermal and electro-magnetic protection;  
Automatic switcher with thermal and electro-magnetic protection;  
Automatic switcher with thermal and electro-magnetic protection;

3P+N  
Separator de sarcină & tetrapolar debrsoabil;  
Centre-a de măsură parametrilor electri; Pi, Pa, Pc, I, U, cos Ø,  
Transformator de curent;  
Measure devices for electric parameters:Pi, Pa, Pc, I, U, cosØ,  
power transformer;  
Siguranță fuzibilă;  
Fusible plug;  
Ampermetru digital, transformator de curent;  
Digital ammeter, power transformer;  
Anclansarea automată a rezervei;  
Automatic switching-on of the back-up unit;  
Post de transformare;  
Transformer point;  
Racor electric;  
Electric connection;

K1, 4P, 16A  
Contactor;  
Contactor;

CYY-F 5x4mm<sup>2</sup> Cablu cu conductoare de cupru, cu izolație din PVC, cu întârziere marită la propagarea flăcării, 5 conductoare cu secțiunea de 4 mm<sup>2</sup>;  
Cable with copper conductors, PVC insulation, enhanced delay upon flame propagation, 5 conductors having 4mm<sup>2</sup> section;

CYAbY  
Cablou cu conductoare de cupru, cu izolație din PVC, armătură din bandă de oțel;  
Cable with copper conductors, PVC insulation, armature of steel strip;

TGD  
Tablou electric general de distribuție;

TGD  
General electric panel;

Notă/ Note:  
Schemele monofilare se vor consulta împreună cu planurile de electrice  
Once the single-line diagrams will be read together with the layouts plans. The contractor has to draw the attention of the designer with regard to any error or incongruity encountered, otherwise the contractor will be responsible for it.



Verificator / Expert  
Checker / Expert

Semnătura  
Signature

Referat / Expertiză  
Report / Expertise

European Investment Bank

MINISTERUL TRANSPORTURILOR

BENEFICIAR / BENEFICIARY :

COMPANIA NAȚIONALĂ DE CĂI FERATE "CFR" SA

PROIECTANT / DESIGNER:

Data  
Date

Semnătura  
Signature