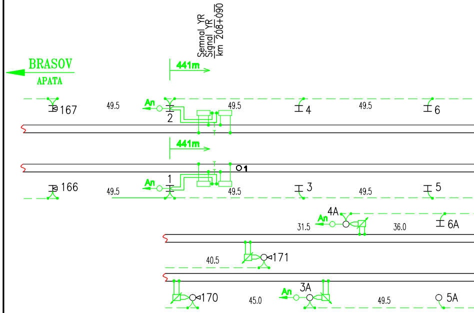
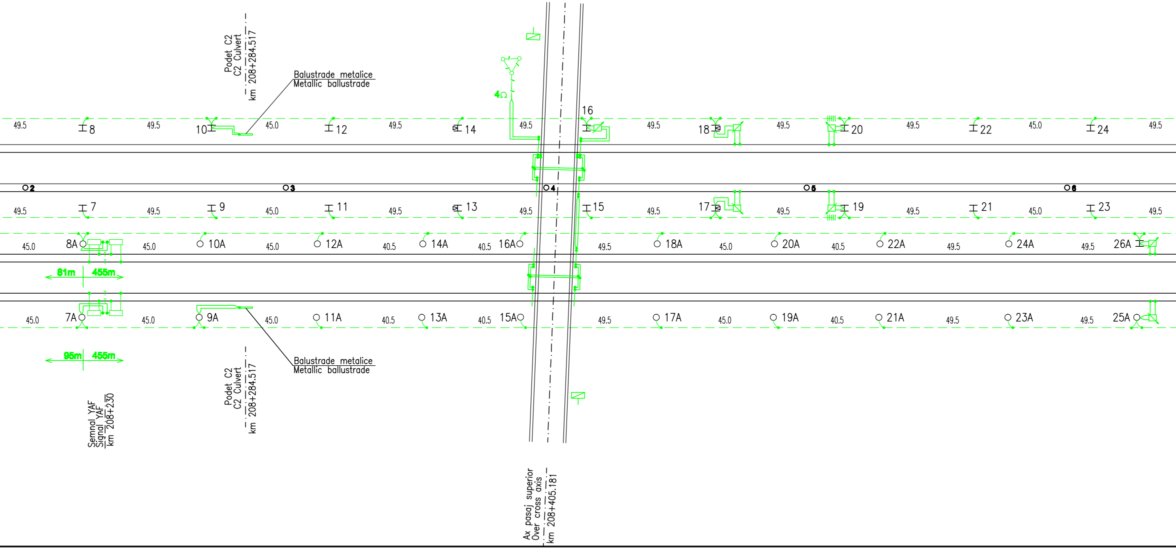
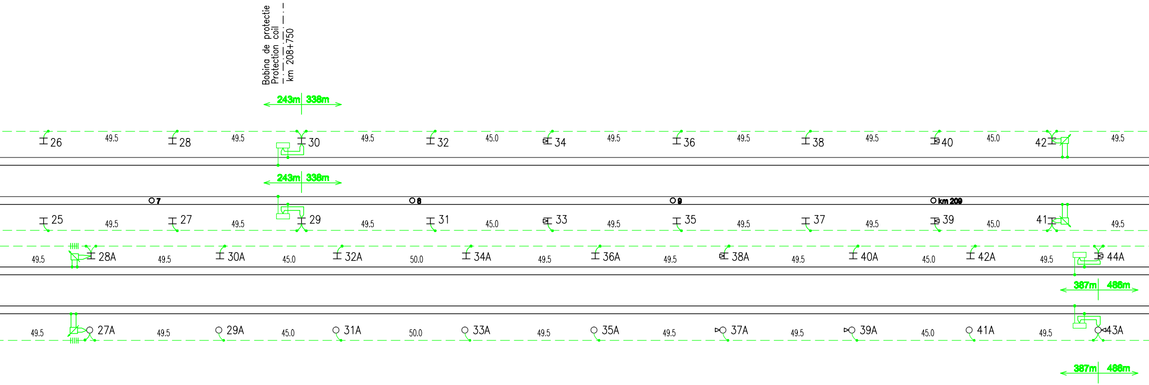
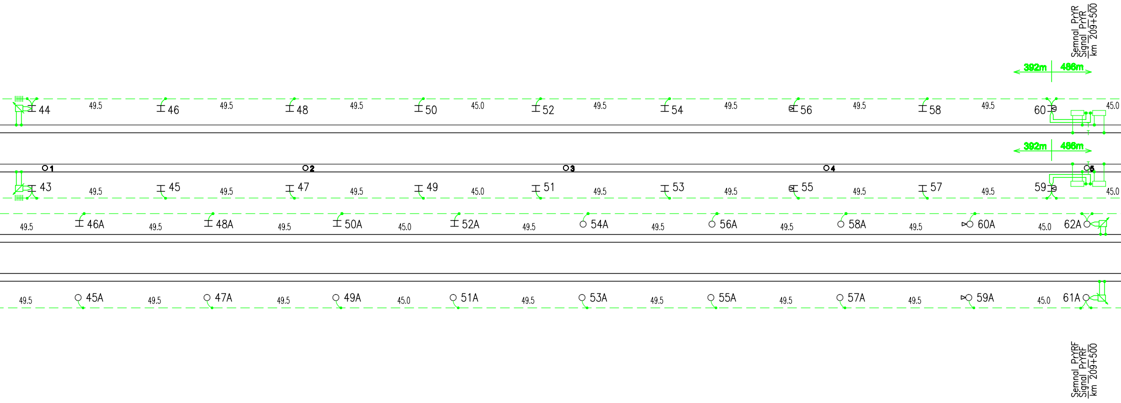
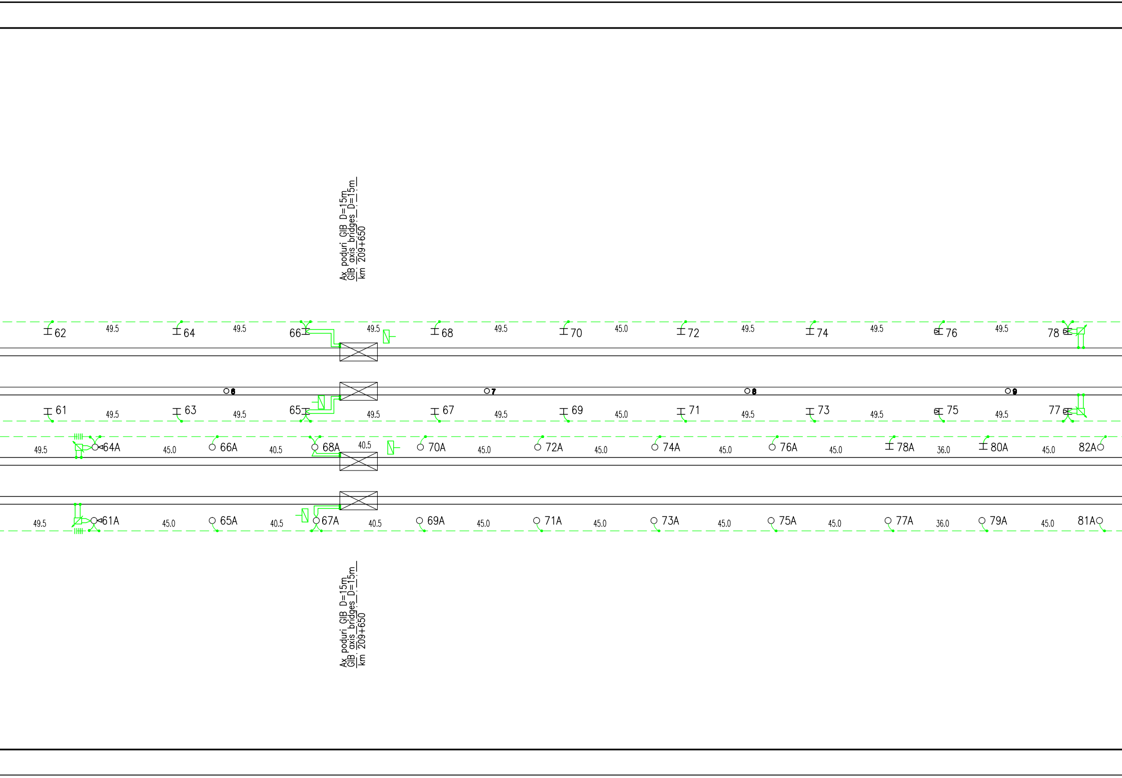

Semnal YR
Signal YR
km 208+090
BRASOV
APATA
441m
167
49.5
An
2
49.5
4
49.5
6
441m
1
166
49.5
An
1
49.5
3
49.5
5
4A
An
31.5
36.0
6A
40.5
171
170
45.0
An
3A
49.5
5A


Podet C2
C2 Culvert
km 208+284.517
Balustrade metalice
Metallic ballustrade
4Ω
16
8
10
12
14
18
20
22
24
49.5
45.0
2
3
4
5
6
7
9
11
13
15
17
19
21
23
8A
10A
12A
14A
16A
18A
20A
22A
24A
26A
40.5
81m
455m
7A
9A
11A
13A
15A
17A
19A
21A
23A
25A
95m
455m
Semnal YAF
Signal YAF
km 208+230
Podet C2
C2 Culvert
km 208+284.517
Balustrade metalice
Metallic ballustrade
Ax pasaj superior
Over cross axis
km 208+405.181


Bobina de protectie
Protection coil
km 208+750
243m
338m
26
49.5
28
49.5
30
49.5
32
45.0
34
49.5
36
49.5
38
49.5
40
45.0
42
49.5
243m
338m
7
8
9
km 209
25
49.5
27
49.5
29
49.5
31
45.0
33
49.5
35
49.5
37
49.5
39
45.0
41
49.5
49.5
28A
49.5
30A
45.0
32A
50.0
34A
49.5
36A
49.5
38A
49.5
40A
45.0
42A
49.5
44A
387m
466m
49.5
27A
49.5
29A
45.0
31A
50.0
33A
49.5
35A
49.5
37A
49.5
39A
45.0
41A
49.5
43A
387m
466m


Semnal PrYR
Signal PrYR
km 209+500
392m
486m
44
46
48
50
52
54
56
58
60
49.5
45.0
392m
486m
1
2
3
4
5
43
45
47
49
51
53
55
57
59
46A
48A
50A
52A
54A
56A
58A
60A
62A
45A
47A
49A
51A
53A
55A
57A
59A
61A
Semnal PrYRF
Signal PrYRF
km 209+500


Ax_poduri_GIB_D=15m
GIB_axis_bridges_D=15m
km: 209+650
62
49.5
64
49.5
66
49.5
68
49.5
70
45.0
72
49.5
74
49.5
76
49.5
78
6
7
8
9
61
49.5
63
49.5
65
49.5
67
49.5
69
45.0
71
49.5
73
49.5
75
49.5
77
49.5
64A
45.0
66A
40.5
68A
40.5
70A
45.0
72A
45.0
74A
45.0
76A
45.0
78A
36.0
80A
45.0
82A
49.5
61A
45.0
65A
40.5
67A
40.5
69A
45.0
71A
45.0
73A
45.0
75A
45.0
77A
36.0
79A
45.0
81A
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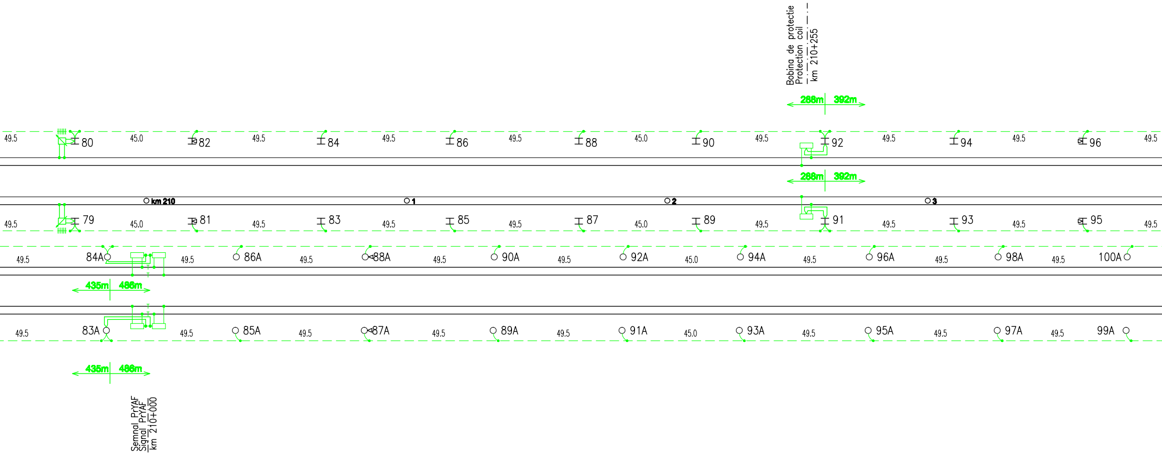
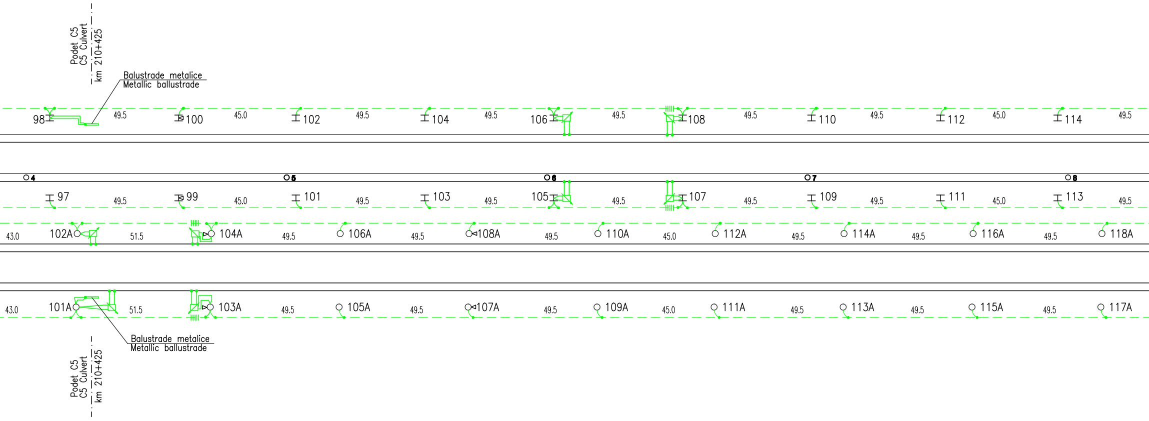
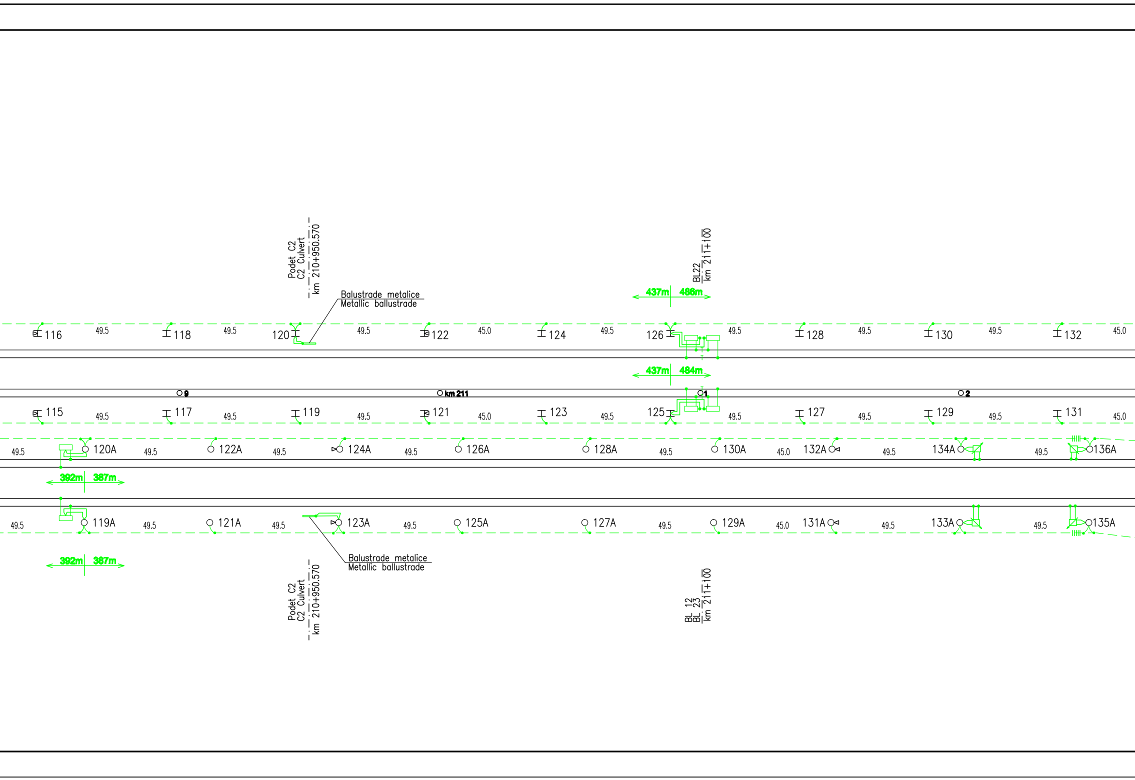
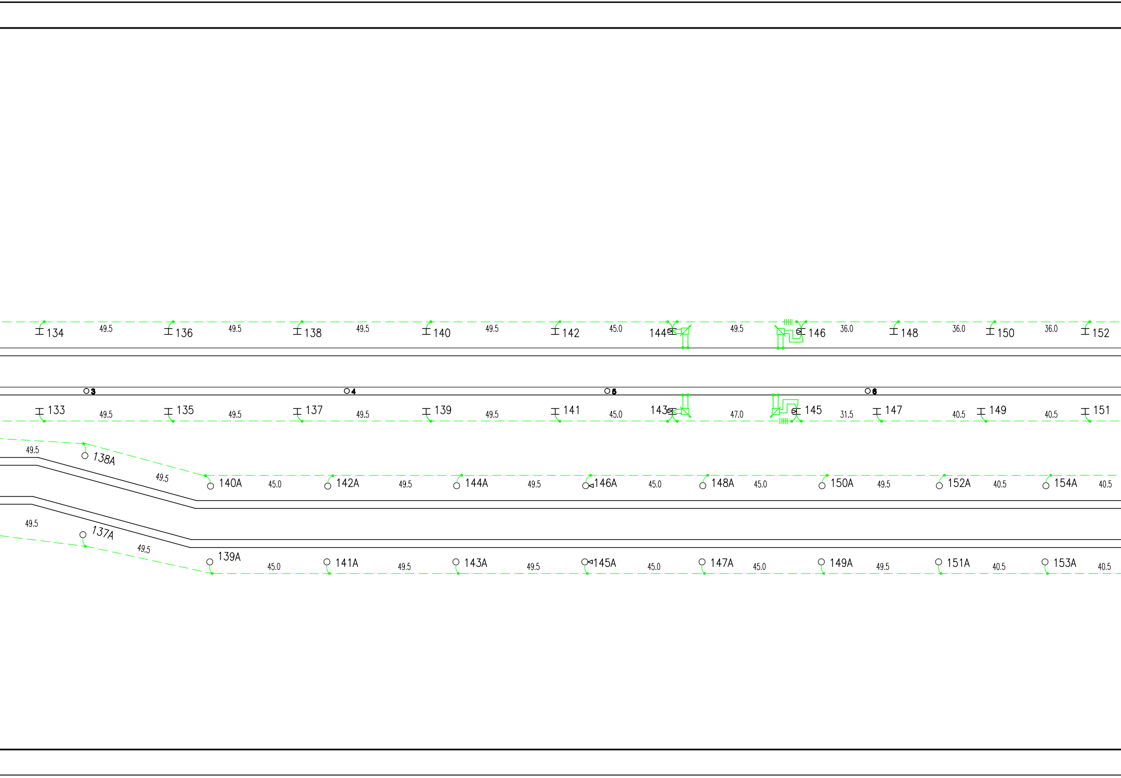
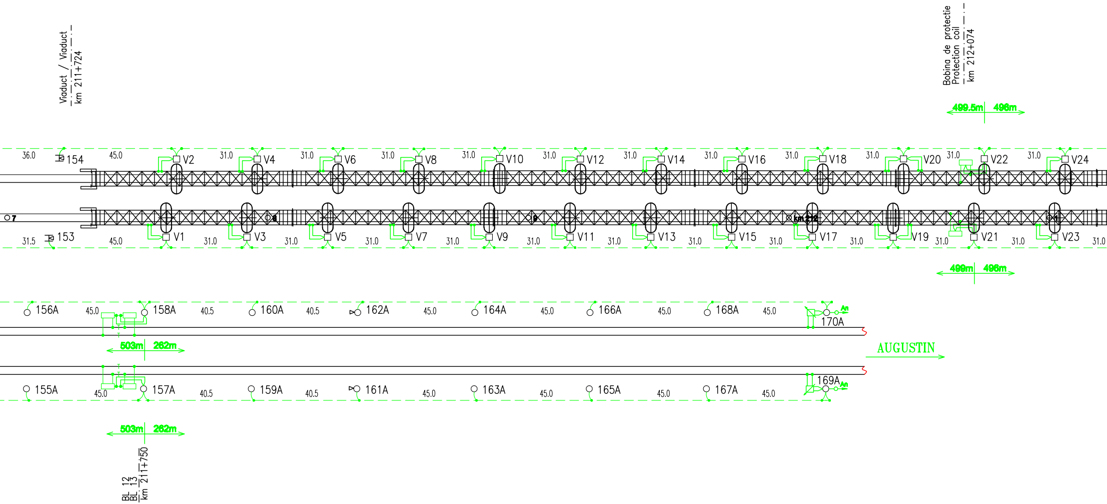
km: 209+650

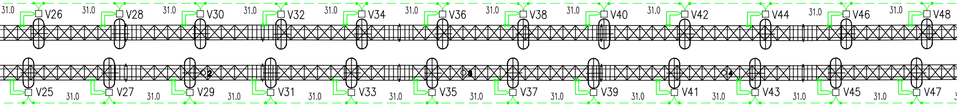

Bobina de protectie
Protection coil
km 210+255
288m 392m
49.5
80
45.0
82
49.5
84
49.5
86
49.5
88
45.0
90
49.5
92
49.5
94
49.5
96
49.5
288m 392m
km 210
1
2
3
49.5
79
45.0
81
49.5
83
49.5
85
49.5
87
45.0
89
49.5
91
49.5
93
49.5
95
49.5
49.5
84A
49.5
86A
49.5
88A
49.5
90A
49.5
92A
45.0
94A
49.5
96A
49.5
98A
49.5
100A
435m 486m
49.5
83A
49.5
85A
49.5
87A
49.5
89A
49.5
91A
45.0
93A
49.5
95A
49.5
97A
49.5
99A
435m 486m
Semnal PrYAF
Signal PrYAF
km 210+000


Podet C5
C5 Culvert
km 210+425
Balustrade metalice
Metallic ballustrade
98
49.5
100
45.0
102
49.5
104
49.5
106
49.5
108
49.5
110
49.5
112
45.0
114
49.5
4
5
6
7
8
97
49.5
99
45.0
101
49.5
103
49.5
105
49.5
107
49.5
109
49.5
111
45.0
113
49.5
43.0
102A
51.5
104A
49.5
106A
49.5
108A
49.5
110A
45.0
112A
49.5
114A
49.5
116A
49.5
118A
43.0
101A
51.5
103A
49.5
105A
49.5
107A
49.5
109A
45.0
111A
49.5
113A
49.5
115A
49.5
117A
Balustrade metalice
Metallic ballustrade
Podet C5
C5 Culvert
km 210+425

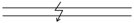
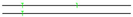
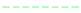
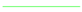
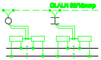
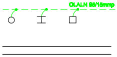
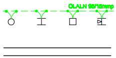
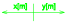
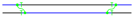
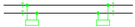
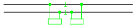
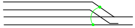

Podet C2
C2 Culvert
km 210+950.570
Balustrade metalice
Metallic ballustrade
BL22
km 211+100
437m
486m
116
49.5
118
49.5
120
49.5
122
45.0
124
49.5
126
49.5
128
49.5
130
49.5
132
45.0
437m
484m
9
km 211
1
2
115
49.5
117
49.5
119
49.5
121
45.0
123
49.5
125
49.5
127
49.5
129
49.5
131
45.0
49.5
120A
49.5
122A
49.5
124A
49.5
126A
128A
49.5
130A
45.0
132A
49.5
134A
49.5
136A
392m
387m
49.5
119A
49.5
121A
49.5
123A
49.5
125A
127A
49.5
129A
45.0
131A
49.5
133A
49.5
135A
392m
387m
Balustrade metalice
Metallic ballustrade
Podet C2
C2 Culvert
km 210+950.570
BL 12
BL 23
km 211+100


134
49.5
136
49.5
138
49.5
140
49.5
142
45.0
144
49.5
146
36.0
148
36.0
150
36.0
152
3
4
5
6
133
49.5
135
49.5
137
49.5
139
49.5
141
45.0
143
47.0
145
31.5
147
40.5
149
40.5
151
49.5
138A
49.5
140A
45.0
142A
49.5
144A
49.5
146A
45.0
148A
45.0
150A
49.5
152A
40.5
154A
40.5
49.5
137A
49.5
139A
45.0
141A
49.5
143A
49.5
145A
45.0
147A
45.0
149A
49.5
151A
40.5
153A
40.5


Viaduct / Viaduct
km 211+724
Bobina de protectie
Protection coil
km 212+074
499.5m
496m
36.0
154
45.0
V2
31.0
V4
31.0
V6
31.0
V8
31.0
V10
31.0
V12
31.0
V14
31.0
V16
31.0
V18
31.0
V20
31.0
V22
31.0
V24
7
8
9
km 212
1
31.5
153
45.0
V1
31.0
V3
31.0
V5
31.0
V7
31.0
V9
31.0
V11
31.0
V13
31.0
V15
31.0
V17
31.0
V19
31.0
V21
31.0
V23
31.0
499m
496m
156A
45.0
158A
40.5
160A
40.5
162A
45.0
164A
45.0
166A
45.0
168A
45.0
170A
An
503m
262m
AUGUSTIN
155A
45.0
157A
40.5
159A
40.5
161A
45.0
163A
45.0
165A
45.0
167A
45.0
169A
An
503m
262m
BL 12
BL 13
km 211+750


31.0
V26
31.0
V28
31.0
V30
31.0
V32
31.0
V34
31.0
V36
31.0
V38
31.0
V40
31.0
V42
V44
31.0
V46
31.0
V48
2
3
4
V25
31.0
V27
31.0
V29
31.0
V31
31.0
V33
31.0
V35
31.0
V37
31.0
V39
31.0
V41
31.0
V43
31.0
V45
31.0
V47

LEGENDA / LEGEND:

	Linie c.f. electrificată Electrified railway
	Joantă izolată Insulated rail joint
	Conductor colector din oțel-aluminiu 95/15 mmp Earthing conductor steel-aluminum 95/15 sq mm
	Conductor din bandă de otel Ø 10 mm galvanizat Galvanised steel conductor Ø 10 mm
	Stalp de beton echipat cu corp de iluminat Concrete pole equipped with lighting unit
	Priza de pământ Earth plate
	Legarea colectivă a stâlpului LC la mediana bobinei de joantă prin conductorul de protecție OLALN 95/15mmp / CL pole collective connection through OLALN 95/15mmp protection conductor at the impedance coil mid-point
	Legarea simplă a stâlpului LC la conductorul de protecție OLALN95/15mmp Simple connection of CL pole at OLALN95/15mmp protection conductor
	Legarea dublă a stâlpului LC la conductorul de protecție OLALN95/15mmp Double connection of CL pole at OLALN95/15mmp protection conductor
	Ancora pentru conductorul de protecție OLALN 95/15mmp Anchor for OLALN 95/15mmp protection conductor
	Izolator de separare electrică a conductorului de protecție Sectionning insulator of over-head protective conductor
	x, y - Lungimile conductorului de protecție x, y - Overhead protective conductor lenghts
	Bobina de joantă Impedance coil
	Bobina de protecție Protection coil
	Separator monopolar de exterior Outdoor single phase disconnector
	Transformator Transformer
	Circuit de cale monofilar Single-track circuit
	Circuit de cale bifilar Double-track circuit
	Bobina de joantă CED Joint coil CED
	Funie de cupru de 50mmp Copper cord 50mmp
	Subtraversare linie c.f. ţn tub de cauciuc Railway lines under-crossing by rubber tube
	Placa avertizoare "STAȚIONAREA PE POD INTERZISĂ" Marker "Staying on the bridge is not permised"
	Indicator cerc pentru restricție gabarit și plăcuță suplimentară pentru indicarea distanței Circle indicator for gauge restriction and additional plate to indicate distance

OLALN 95/15mmp
OLALN 95/15mmp
OLALN 95/15mmp
An
x[m]
y[m]

NOTA / NOTE:

SEMNIFICAȚIA CULORILOR FOLOSITE ÎN PREZENTAREA PLANULUI DE PROTECTIE ESTE URMĂTOAREA:
- verde - elemente noi ale instalatiei de protectie
- negru - elemente noi care aparțin altor specialități
- gri - elemente existente ale planului de situație

THE SIGNIFICATION OF COLORS USED TO PRESENT THE PROTECTION DRAWING:
- green - new elements of the protection installations
- black - new elements of others specialities
- grey - existing elements of the layout plan

- balustradele podurilor si podetelor c.f. se vor proteja conform ID 33
- the ballustrades of the bridges and culverts at will be protected according to ID 33
- stalpii de iluminat de pe peroane se vor proteja conform ID 33
- the lighting poles on the platforms will be protected according to ID 33

D			
C			
B			
A			
Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer

GUVERNUL ROMANIEI
ROMANIAN GOVERNMENT

PROIECT FINANȚAT DE UNIU
EUROPEAN UNION FI

CFR

CLIENT / CLIENT

ITALFERR
GRUPPO FERROVIE DELLO STATO
Joint Venture leader

Scott Wilson

OBERM
PLANEN + BERA

CONSULTANT / CONSULTANT

Aprobat Approved	Şef proiect Project manager	R. Liuzza
Aprobat Approved	Coordonator Secțiune 1 Section 1 Coordinator	C. Gambelli
Verificat Checked	Expert Verificator Checking Expert	G. Buffarini

SUBCONTRACTANT / SUBCONTRACTOR

AREX COMPANY

Aprobat Approved	Responsabil Subcontractant Subcontractor Responsible	A.Stanciu - Dinulescu
Întocmit Elaborated	Proiectant Designer	A. Teutu

Reabilitarea liniei de cale ferata Brașov - Simeria, parte componentă
IV Pan European, pentru circulația trenurilor cu viteza maximă de
Tronsonul : Brașov - Sighișoara
Rehabilitation of the railway line Brașov - Simeria, component Part of the IV
Corridor, for the trains circulation with maximum speed of 160 km/h,
Section : Brașov - Sighișoara

Denumire desen / Drawing Title :

Interval Apața-Racoș / Apața-Racoș S
Protecția instalațiilor din cale și vecinătate / Protection of tr

Codificare / Codification System

Scara / Scale
1:1000

E A 5 1 | 0 1 | C | 1 0 | L 7 | P I | 0 0

Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR

UNEA EUROPEANĂ
NANCED PROJECT

C.N.C.F. "C.F.R." - S.A.

EYER
ATEN GmbH

TECNIC
Consulting Engineers

Data Date	Semnătură Signature
12.2011	
12.2011	
12.2011	

12.2011	
12.2011	

a coridorului
160 km/h,

Pan-European

Project/Project
2004/RO/16/P/PA/003

Faza / Phase:
P.Th. / T.D.

Section
ack and proximity installations

LOT / LOT	Nr. / No 01 / 02

1 0 0 0 1 0

297x5000