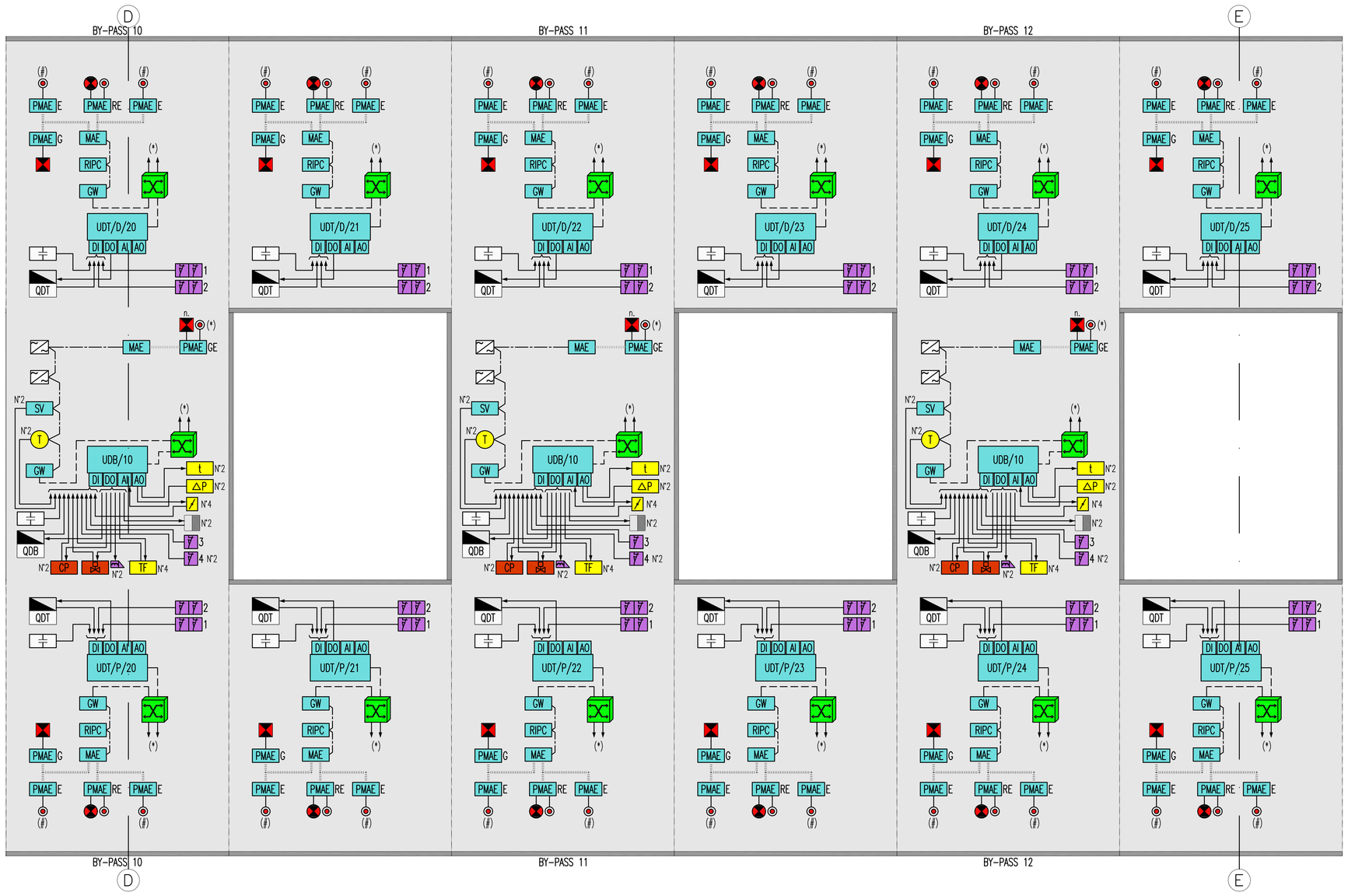
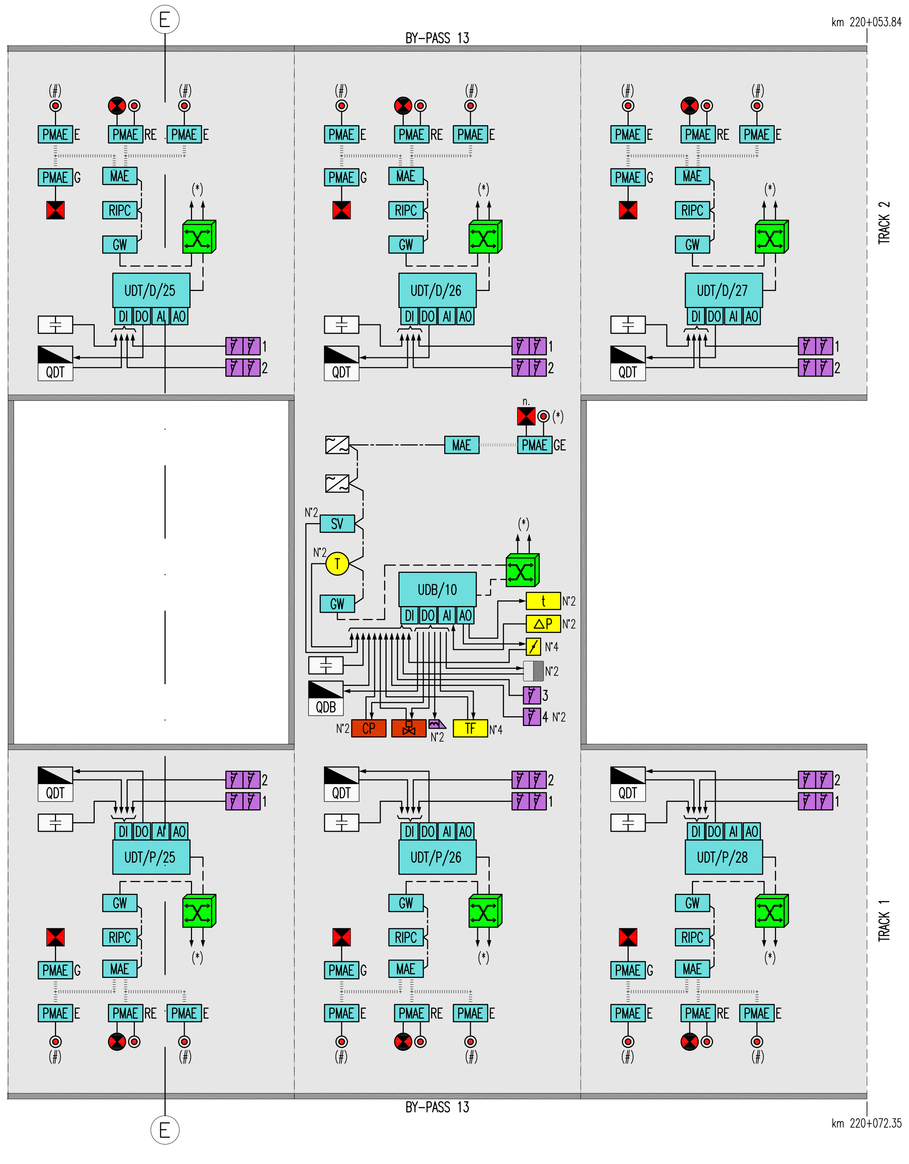
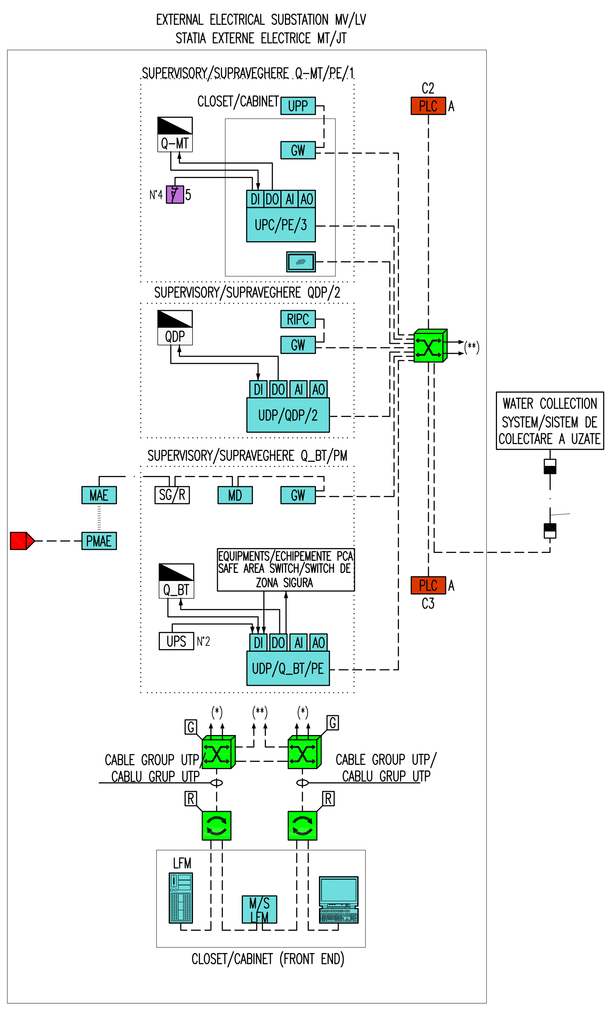




SAFE AREA/ZONA SIGURA



POSITION EQUPIMENTS LEGEND/ LEGENDA POZITIA EQUIPAMENTE

..../PE	SAFE AREA/ZONA SIGURA
..../..../D	TRACK 2/PISTA 2
..../..../P	TRACK 1/PISTA 1
...../1	PROGRESSIVE NUMBERING/PROGRESSIVE NUMEROTAREA

NETWORK LEGEND/LEGENDA OBIECTIVE

	SIGN ON LINE CARRIER/SEMNUL SUS TRANSPORTATOR LINIE
	ETHERNET NETWORK ON CABLE CAT6 UTP/ETHERNET PE CABLU CAT 6 UTP
	ETHERNET NETWORK ON FIBER OPTIC/ETHERNET PE FIBRA OPTICA
	CABLE DIGITAL OR ANALOGIC SIGNALS/CABLU DIGITAL SAU ANALOGIC
	SERIAL NETWORK RS485/SERIAL REȚEA RS485

SYMBOLS LEGEND/LEGENDA SIMBOLURI

NN	ELECTRICAL PANEL NN/ ELECTRICE PANEL = – Q_MT (MEDIA TENSIONE); – Q_BT (BASSA TENSIONE); – QDP (PIAZZALE); – QDT (TRATTA); – QDB (BY–PASS); – QBI (BIVIO); – Q_RI (RIFASAMENTO); – Q_AI (ANTINCENDIO); – Q_SI (AUX. ANTINCENDIO); – Edifici (GENERALE EDIFICI DI PM).
UPS	UPS – GROUP OF ABSOLUTE CONTINUITY/GRUP DE CONTINUITATE ABSOLUTĂ
	ELECTRICITY STORAGE SYSTEM/SISTEME DE DEPOZITARE ELECTRICITATE
	INVERTER
SG/R	ELECTRONIC RELEASES/DISEMINĂRILE ELECTRONIC
	ACTIVE EQUIPMENT/ACTIVE UTILAJE SWITCH NODE/SWITCH NOD G GENERAL SWITCH/SWITCH GENERALE S SWITCH OF CROSSROADS/SWITCH DE INTERSECTIE
	PASSIVE SYSTEM PATCH/PASIV SISTEM PATCH R CABLE UTP CAT.6/CABLE UTP cat.6 O FIBER OPTIC CABLE (MULTIMODE AND–OR SINGLEMODE)/CABLU DE FIBRA OPTICA (MULTIMODE SI / SAU SINGLEMODE)
RIPC	RELAY INDIRECT PROTECTION AND CURRENT CONTROL/RELEU PROTEJEZE INDIRECT ȘI CONTROL DE CURENT
MAE	MODULE ANALOGIC EXTERNAL/MODULUL ANALOG EXTERNE (MAE)
GW	GATEWAY ETHERNET TCP/IP–SERIALE RS485
PMAE *	PERIPHERAL DEVICE/PERIFERIC DISPOZITIV MAE E – EMERGENCY LIGHT BUTTON/URGENȚĂ LUMINA BUTONULUI G – GENERAL LIGHTING LAMPS/ILUMINAT GENERAL LAMPI R – LAMPS OF REFERENCE BYPASS–NICHE/LĂMPI DE REFERINȚĂ BYPASS–NISA
UDB	UNIT PLC IN QDB/UNITATEA PLC IN QDB
UDT	UNIT PLC IN QDT/UNITATEA PLC IN QDT
UPP	PROTECTIONS Q_MT/PROTECȚIE Q_MT
SV	SENSOR VIBRATION UNIT FANS/SENSOR VIBRAȚII UNITATEA DE FANI
MD	DIGITAL MULTIMETER/DIGITAL MULTIMETER
M/S LFM	UNIT MASTER–SLAVE LFM/UNITATEA MASTER–SLAVE LFM
AI	PLC DATA INPUTS/PLC DATELOR INTRARI
AO	PLC DATA OUTPUTS/PLC DATELOR IEȘIREA
DI	PLC DIGITAL INPUTS/PLC DIGITAL INTRARI
DO	PLC DIGITAL OUTPUT/PLC DIGITALĂ IEȘIREA
	LIGHT FIXTURES 1X18 W REFERENCE LIGHTING/PROGRAME DE LUMINĂ 1X18 W ILUMINAT DE REFERINȚĂ
	LIGHT FIXTURES 1X18 W GENEREAL LIGHTING/PROGRAME DE LUMINĂ 1X18 W ILUMINAT GENERAL
	LIGHT FIXTURES 1X18 W EMERGENCY LIGHTING/PROGRAME DE LUMINĂ 1X18 W ILUMINAT DE URGENȚĂ
	PROJECTOR FOR EXTERNAL/PROIECTOR PENTRU EXTERNE
	SWITCH WITH INDICATOR LIGHT/SWITCH CU INDICATOR LUMINOS
(*)	DOOR STATE DETECTOR/DETECTOR DE STAT PORT 1 CONTROL DOORS–LOCKERS HYDRANT LOCATION/CONTROL DE USI–locăit HIDRANT LOCATION 2 CONTROL DOORS–LOCKERS HYDRANT LOCATION At 125 m/CONTROL DE USI–locăit HIDRANT LOCATION A 125 M 3 FIRE CABINET DOORS CONTROL/CONTROL DE CABINET USI FOC 4 CONTROL BY–PASS DOOR/CONTROL DE BYPASS UȘĂ 5 OPENING BOX TRANSFORMER/DESCHIS BOX TRANSFORMATOR
	ELECTRIC DOOR LOCK BYPASS/BLOCAREA ELECTRICE UȘĂ BYPASS
	CONTROL UNIT DOOR BY–PASS/REMOTE CONTROL UȘĂ BYPASS
CP	DOORS CONTROL/USA CONTROL
	FIRE PROTECTION VALVE/FOC ROBINET
PLC A	PROGRAMMABLE LOGIC CONTROLLERS (PLC) FIRE PROTECTION/LOGICE PROGRAMABILE CONTROLLER FOC
TF	FIRE DAMPER/FOC AMORTIZOR
△P	PRESSURE DIFFERENTIAL/PRESIUNE DIFERENTIALA
t	TEMPERATURE PROBE/SONDA DE TEMPERATURA
	FIREPROOF DAMPER BYPASS/AMORTIZOR DE INCENDIILOR BYPASS
	TEMPERATURE SENSORS FANS/SENZORI DE TEMPERATURĂ VENTILATOARE
	CLIENT
	SERVER
	PANEL VIEWER/PANOULUI DE AFIȘARE
	SIGNAL CONVERTER: OPTICAL–ELECTRICAL ON FIBER MULTIMODE/SEMNUL CONVERTER: ELECTRICE–OPTICE SUS FIBRA MULTIMODE

NOTE/NOTE:

– (*) CONNECTED TO THE TUNNEL EMERGENCY DATA NETWORK/CONECTAT LA REȚEAUA DE DATE DE URGENȚĂ ÎN TUNEL

– (**) CONNECTED TO THE SAFE AREA EMERGENCY DATA NETWORK/CONECTAT LA REȚEAUA DE DATE DE URGENȚA DE PLATA

– (#) BUTTON EVERY 80 M APPROXIMATELY/BUTONUL DE FIECARE ÎN JURUL VALORII DE 80 M

Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer	Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR
D					
C					
B					
A					

GUVERNUL ROMANIEI
ROMANIAN GOVERNMENT

PROIECT FINANȚAT DE UNIUNEA EUROPEANĂ
EUROPEAN UNION FINANCED PROJECT

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

CLIENT / CLIENT

ITALFERR GRUPPO FERROVIE DELLO STATO Joint Venture leader · Scott Wilson · OBERMEYER PLANEN + BERATEN GmbH · TECNIC Consulting Engineers

CONSULTANT / CONSULTANT

			Data Date	Semnătură Signature
Aprobat Approved	Șef proiect Project manager	R. Liuzza		
Aprobat Approved	Coordonator Secțiune 1 Section 1 Coordinator	C. Gambelli		
Verificat Checked	Tunel Expert Tunnel Expert	C. Gambelli		
Întocmit Elaborated	Proiectant Designer	P. Amodio		

SUBCONSULTANT / SUBCONSULTANT

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible			
Întocmit Elaborated	Proiectant Designer			

Reabilitarea liniei de cale ferata Brașov - Simeria, parte componentă a coridorului IV Pan European, pentru circulația trenurilor cu viteza maximă de 160 km/h.
Secțiune 1 Brasov - Sighisoara

Rehabilitation of the railway line Brașov - Simeria, component Part of the IV Pan-European Corridor, for the trains circulation with maximum speed of 160 km/h.
Section 1 Brasov - Sighisoara

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

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

Denumire desen / Drawing Title : **TUNNEL/TUNELUL ORMENIS**
NATURAL TUNNEL/TUNELUL NATURAL
Safety Tunnel Power Supply system /Sistem de alimentare de siguranță a tunelui
Diagram LFM system: supervision /Diagrame Sistem LFM: supraveghere

Codificare / Codification System: E A 5 1 | 0 1 | C | 1 0 | L X | T S | 1 0 | 1 | 6 | 0 0 8 | 0

Scara / Scale: -

LOT

Nr. / No.: 3/3