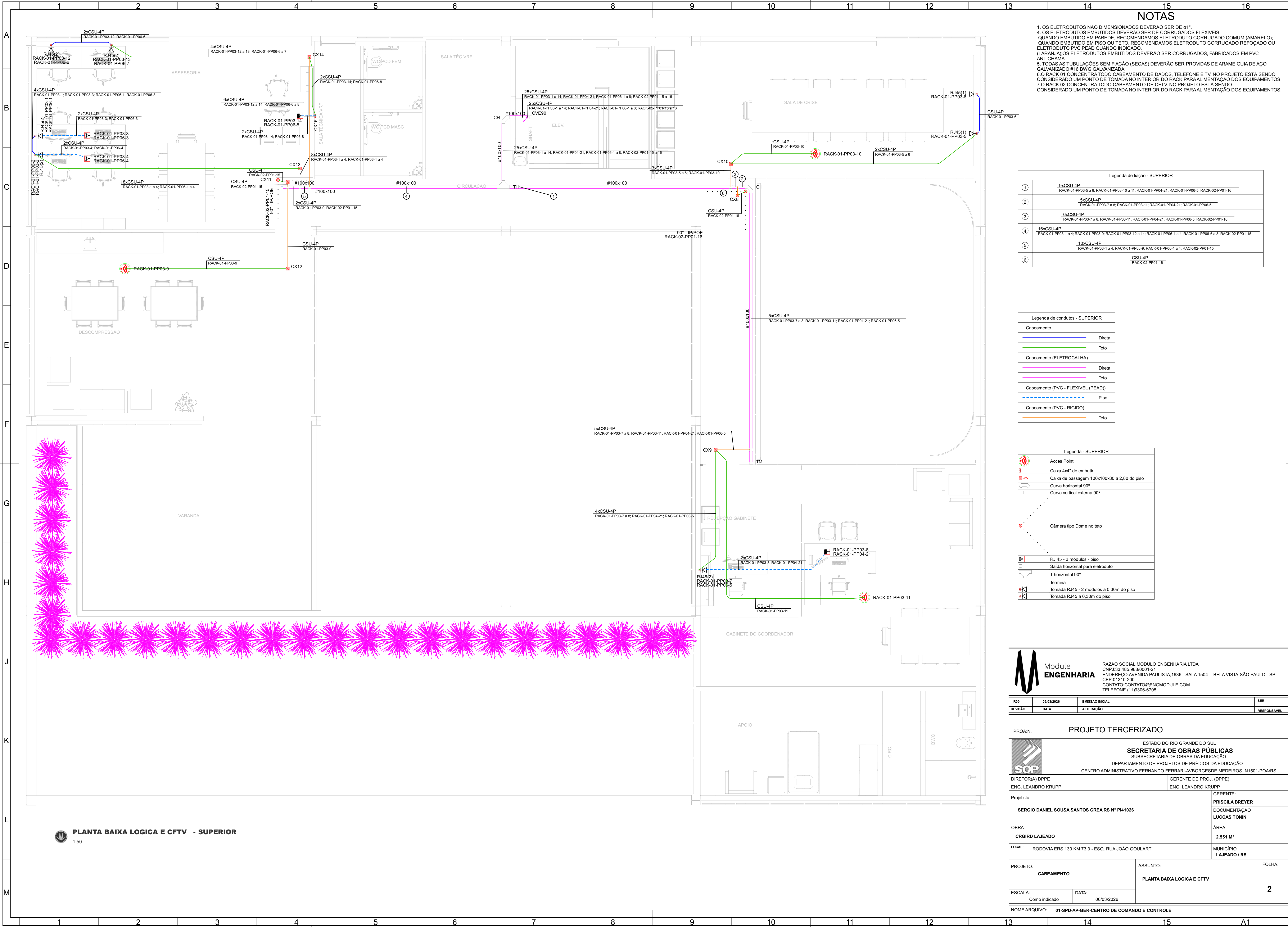






NOTAS

- 1. OS ELETRODUTOS NÃO DIMENSIONADOS DEVERÃO SER DE Ø1".
- 4. OS ELETRODUTOS EMBUTIDOS DEVERÃO SER DE CORRUGADOS FLEXÍVEIS. QUANDO EMBUTIDO EM PAREDE, RECOMENDAMOS ELETRODUTO CORRUGADO COMUM (AMARELO); QUANDO EMBUTIDO EM PISO OU TETO, RECOMENDAMOS ELETRODUTO CORRUGADO REFOÇADO OU ELETRODUTO PVC PEAD QUANDO INDICADO.
- (LARANJA) OS ELETRODUTOS EMBUTIDOS DEVERÃO SER CORRUGADOS, FABRICADOS EM PVC ANTICHAMA.
- 5. TODAS AS TUBULAÇÕES SEM FIAÇÃO (SECAS) DEVERÃO SER PROVIDAS DE ARAME GUIA DE AÇO GALVANIZADO #16 BWG GALVANIZADA.
- 6. O RACK 01 CONCENTRA TODO CABEAMENTO DE DADOS, TELEFONE E TV. NO PROJETO ESTÁ SENDO CONSIDERADO UM PONTO DE TOMADA NO INTERIOR DO RACK PARA ALIMENTAÇÃO DOS EQUIPAMENTOS.
- 7. O RACK 02 CONCENTRA TODO CABEAMENTO DE CFTV. NO PROJETO ESTÁ SENDO CONSIDERADO UM PONTO DE TOMADA NO INTERIOR DO RACK PARA ALIMENTAÇÃO DOS EQUIPAMENTOS.

Legenda de fiação - SUPERIOR	
①	9xCSU-4P RACK-01-PP03-5 a 8; RACK-01-PP03-10 a 11; RACK-01-PP04-21; RACK-01-PP06-5; RACK-02-PP01-16
②	5xCSU-4P RACK-01-PP03-7 a 8; RACK-01-PP03-11; RACK-01-PP04-21; RACK-01-PP06-5
③	6xCSU-4P RACK-01-PP03-7 a 8; RACK-01-PP03-11; RACK-01-PP04-21; RACK-01-PP06-5; RACK-02-PP01-16
④	10xCSU-4P RACK-01-PP03-1 a 4; RACK-01-PP03-9; RACK-01-PP03-12 a 14; RACK-01-PP06-1 a 4; RACK-01-PP06-8 a 8; RACK-02-PP01-15
⑤	10xCSU-4P RACK-01-PP03-1 a 4; RACK-01-PP03-9; RACK-01-PP06-1 a 4; RACK-02-PP01-15
⑥	CSU-4P RACK-02-PP01-16

Legenda de condutos - SUPERIOR	
Cabeamento	
	Direta
	Teto
Cabeamento (ELETROCALHA)	
	Direta
	Teto
Cabeamento (PVC - FLEXÍVEL (PEAD))	
	Piso
Cabeamento (PVC - RÍGIDO)	
	Teto

Legenda - SUPERIOR	
	Access Point
	Caixa 4x4" de embutir
	Caixa de passagem 100x100x80 a 2,80 do piso
	Curva horizontal 90°
	Curva vertical externa 90°
	Câmera tipo Dome no teto
	RJ 45 - 2 módulos - piso
	Saida horizontal para eletroduto
	T horizontal 90°
	Terminal
	Tomada RJ45 - 2 módulos a 0,30m do piso
	Tomada RJ45 a 0,30m do piso

RAZÃO SOCIAL: MODULO ENGENHARIA LTDA
CNPJ: 33.485.988/0001-21
ENDEREÇO: AVENIDA PAULISTA, 1636 - SALA 1504 - BELA VISTA - SÃO PAULO - SP
CEP: 01310-200
CONTATO: CONTATO@ENMODULE.COM
TELEFONE: (11) 9306-8705

R00	06/03/2025	EMIÇÃO INICIAL	SER
REVISÃO	DATA	ALTERAÇÃO	RESPONSÁVEL

PROA.N.

ESTADO DO RIO GRANDE DO SUL
SECRETARIA DE OBRAS PÚBLICAS
SUBSECRETARIA DE OBRAS DA EDUCAÇÃO
DEPARTAMENTO DE PROJETOS DE PRÉDIOS DA EDUCAÇÃO
CENTRO ADMINISTRATIVO FERNANDO FERRARI- AVBORGESDE MEDEIROS. N1501-POA/RS

DIRETOR(A) DPPE ENG. LEANDRO KRUPP	GERENTE DE PROJ. (DPPE) ENG. LEANDRO KRUPP
Projetista SERGIO DANIEL SOUSA SANTOS CREA RS N° PI41026	GERENTE: PRISCILA BREYER DOCUMENTAÇÃO LUCCAS TONIN

OBRA CRGIRD LAJEADO	ÁREA 2.551 M²
LOCAL: RODOVIA ERS 130 KM 73.3 - ESQ. RUA JOÃO GOULART	MUNICÍPIO LAJEADO / RS

PROJETO: CABEAMENTO	ASSUNTO: PLANTA BAIXA LOGICA E CFTV	FOLHA: 2
ESCALA: Como indicado	DATA: 06/03/2026	
NOME ARQUIVO: 01-SPD-AP-GER-CENTRO DE COMANDO E CONTROLE		

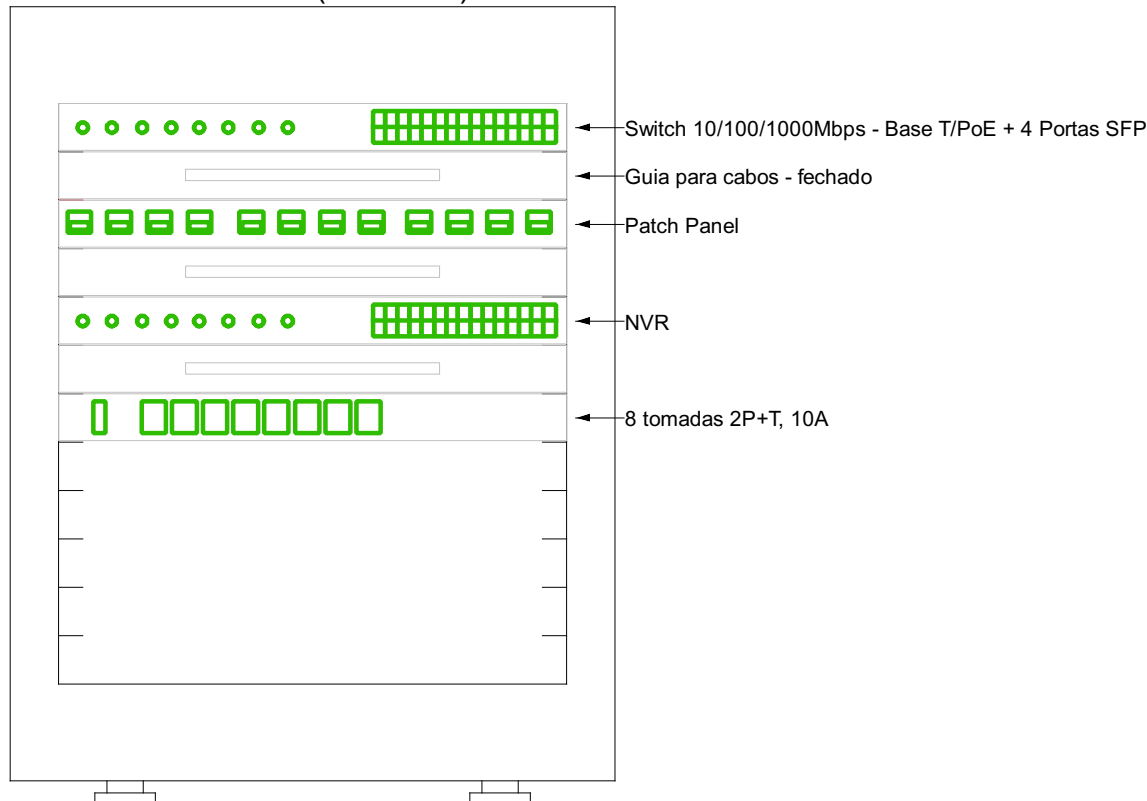
NOTAS

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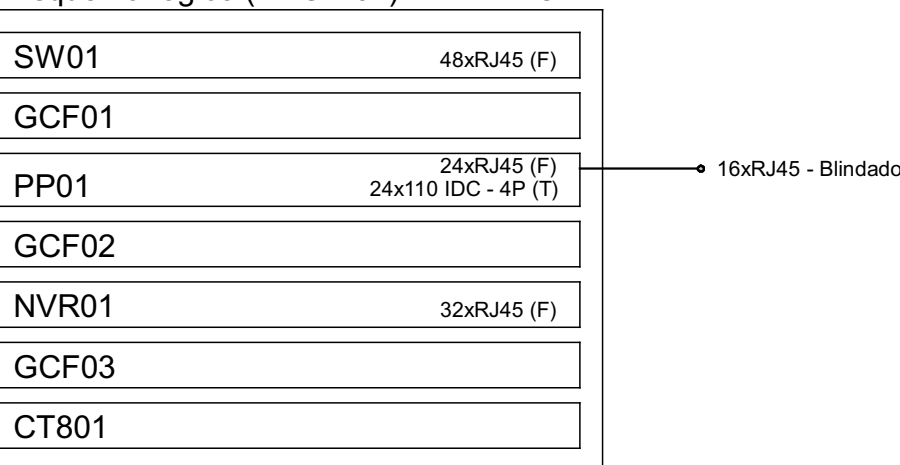
Mapa de cabos - 01-ELE-AP-GER-CENTRO DE COMANDO E CONTROLE

Cabo	Extremidade 1	Extremidade 2	Comprimento(m)	Cabo	Extremidade 1	Extremidade 2	Comprimento(m)
1-CFTV - Subsolo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-1	10,16	10-Telefone	RACK-01-PP04	PAV2-RACK-01-PP04-10	28,90
3-CFTV - Subsolo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-2	10,91	11-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-11	33,95
4-CFTV - Subsolo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-3	36,26	12-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-12	34,85
4-CFTV - Subsolo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-4	36,26	11-Telefone	RACK-01-PP04	PAV2-RACK-01-PP04-11	33,95
5-CFTV - Subsolo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-5	28,65	12-Telefone	RACK-01-PP04	PAV2-RACK-01-PP04-12	34,85
6-CFTV - Subsolo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-6	16,39	13-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-13	34,25
7-CFTV - Subsolo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-7	32,15	13-Telefone	RACK-01-PP04	PAV2-RACK-01-PP04-13	34,25
8-CFTV - Terreo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-8	53,00	14-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-14	35,15
9-CFTV - Terreo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-9	44,86	14-Telefone	RACK-01-PP04	PAV2-RACK-01-PP04-14	35,15
10-CFTV - Terreo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-10	45,81	15-Dados - Terreo CSU-4P	RACK-01-PP01	-	-
11-CFTV - Terreo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-11	44,61	15-Telefone	RACK-01-PP04	-	-
12-CFTV - CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-12	43,95	16-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-16	37,85
13-CFTV - CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-13	52,96	16-Telefone	RACK-01-PP04	PAV2-RACK-01-PP04-16	37,85
14-CFTV - Terreo CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-14	53,35	17-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-17	30,30
15-CFTV - N.A 1" - Ponto CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-15	43,04	17-Telefone	RACK-01-PP04	PAV2-RACK-01-PP04-17	30,30
16-CFTV - N.A 1" - Ponto CSU-4P	RACK-02-PP01	PAV2-RACK-02-PP01-16	43,30	18-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-18	13,45
7-Dados - 1" - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-7	59,60	18-Telefone	RACK-01-PP04	PAV2-RACK-01-PP04-18	13,45
8-Dados - 1" - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-8	64,40	19-Dados - Terreo CSU-4P	RACK-01-PP01	-	-
5-Telefone - 1" - Pvc CSU-4P	RACK-01-PP06	PAV2-RACK-01-PP06-5	59,60	19-Telefone	RACK-01-PP04	-	-
20-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-21	64,40	20-Dados - Terreo CSU-4P	RACK-01-PP01	-	-
9-Dados - 1" - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-9	49,05	20-Telefone	RACK-01-PP04	-	-
10-Dados - 1" - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-10	44,95	6-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-6	44,70
11-Dados - 1" - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-11	62,45	7-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-7	43,80
22-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-22	49,05	8-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-8	34,80
1-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-1	49,05	9-Telefone	RACK-01-PP05	-	-
23-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-23	40,96	12-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-12	42,25
2-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-2	40,96	10-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-10	42,25
1-Telefone - Terreo CSU-4P	RACK-01-PP05	PAV2-RACK-01-PP05-1	43,56	13-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-13	44,85
3-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-3	43,56	11-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-11	44,85
2-Telefone - Terreo CSU-4P	RACK-01-PP05	PAV2-RACK-01-PP05-2	45,00	14-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-14	47,45
4-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-4	45,00	12-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-12	47,45
3-Telefone - Terreo CSU-4P	RACK-01-PP05	PAV2-RACK-01-PP05-3	38,36	15-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-15	44,20
5-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-5	38,36	13-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-13	44,20
6-Telefone - Terreo CSU-4P	RACK-01-PP05	PAV2-RACK-01-PP05-4	39,86	16-Telefone	RACK-01-PP02	PAV2-RACK-01-PP02-16	46,80
6-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-6	39,86	14-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-14	46,80
7-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-7	42,46	17-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-17	49,40
5-Telefone - Terreo CSU-4P	RACK-01-PP05	PAV2-RACK-01-PP05-5	42,46	15-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-15	49,40
8-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-8	44,70	18-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-18	46,45
9-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-9	43,85	16-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-16	46,45
10-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-10	34,80	17-Telefone	RACK-01-PP02	PAV2-RACK-01-PP02-17	43,85
11-Dados - Terreo CSU-4P	RACK-01-PP02	-	-	19-Dados - Terreo CSU-4P	RACK-01-PP05	PAV2-RACK-01-PP05-19	43,85
1-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-1	10,80	20-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-20	28,30
1-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-1	10,80	18-Telefone	RACK-01-PP05	PAV2-RACK-01-PP05-18	28,30
2-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-2	12,50	1-Dados - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-1	60,10
2-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-2	12,50	1" - Pvc CSU-4P	RACK-01-PP06	PAV2-RACK-01-PP06-1	60,10
3-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-3	13,90	1" - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-2	53,30
3-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-3	13,90	1" - Pvc CSU-4P	RACK-01-PP06	PAV2-RACK-01-PP06-2	53,30
4-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-4	15,50	3-Dados - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-3	62,30
4-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-4	15,50	1" - Pvc CSU-4P	RACK-01-PP06	PAV2-RACK-01-PP06-3	62,30
5-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-5	25,90	5-Dados - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-4	55,46
6-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-6	26,80	4-Telefone - Pvc CSU-4P	RACK-01-PP06	PAV2-RACK-01-PP06-4	55,46
5-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-5	25,90	5-Dados - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-5	51,30
6-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-6	26,80	6-Dados - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-6	52,80
7-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-7	27,30	13-Dados - Pvc CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-13	47,66
7-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-7	27,30	22-Dados - Terreo CSU-4P	RACK-01-PP02	PAV2-RACK-01-PP02-22	48,76
8-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-8	26,40	1" - Pvc CSU-4P	RACK-01-PP06	PAV2-RACK-01-PP06-6	56,60
9-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-8	26,40	1" - Pvc CSU-4P	RACK-01-PP06	PAV2-RACK-01-PP06-7	54,40
9-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-9	29,80	1" - Pvc CSU-4P	RACK-01-PP06	PAV2-RACK-01-PP06-8	50,36
9-Telefone - Terreo CSU-4P	RACK-01-PP04	PAV2-RACK-01-PP04-9	29,80	12-Dados - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-12	56,60
10-Dados - Terreo CSU-4P	RACK-01-PP01	PAV2-RACK-01-PP01-10	28,90	13-Dados - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-13	54,40
				1" - Pvc CSU-4P	RACK-01-PP03	PAV2-RACK-01-PP03-14	50,36

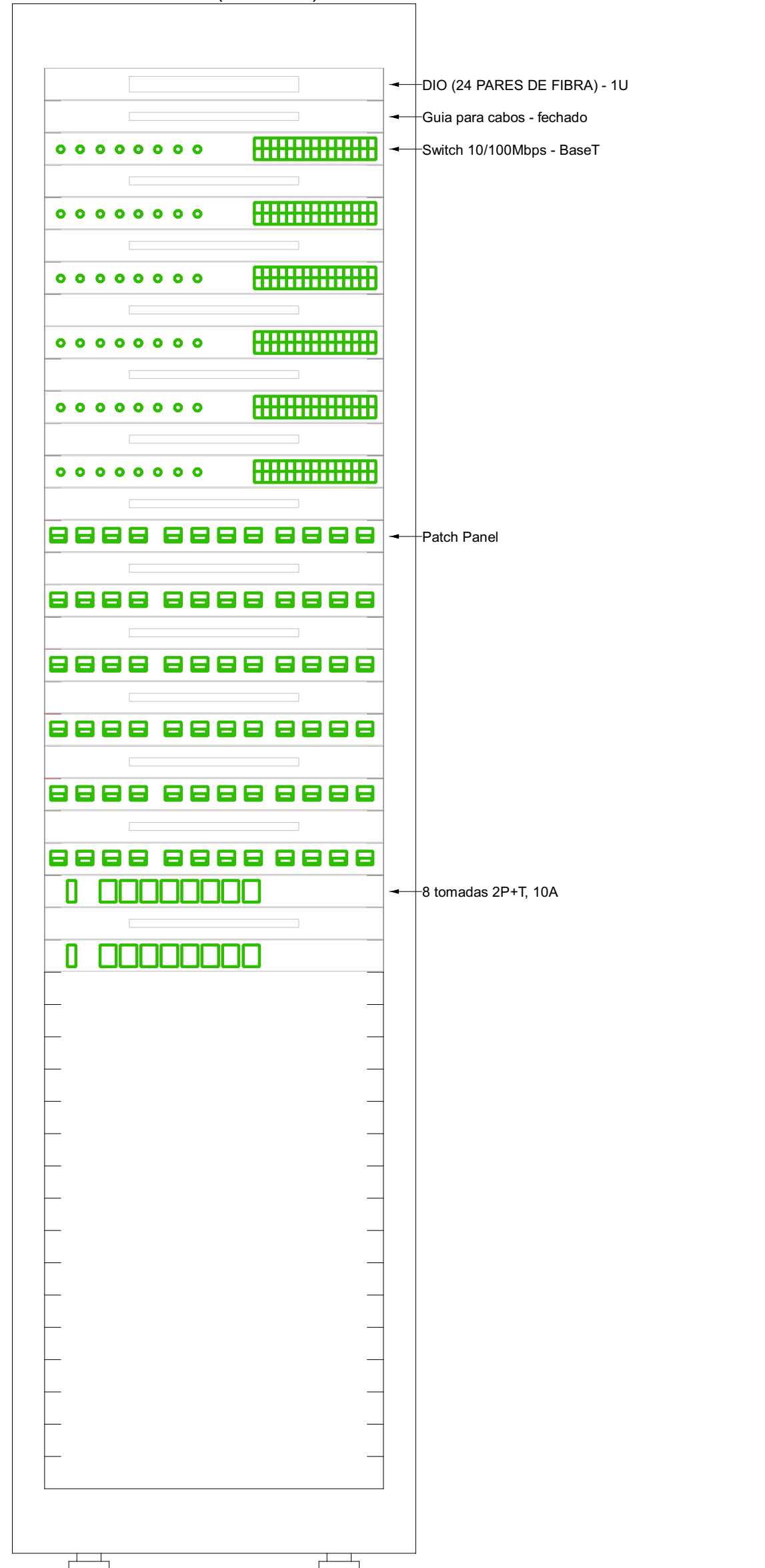
Plano de face do rack (RACK-02) - TÉRREO



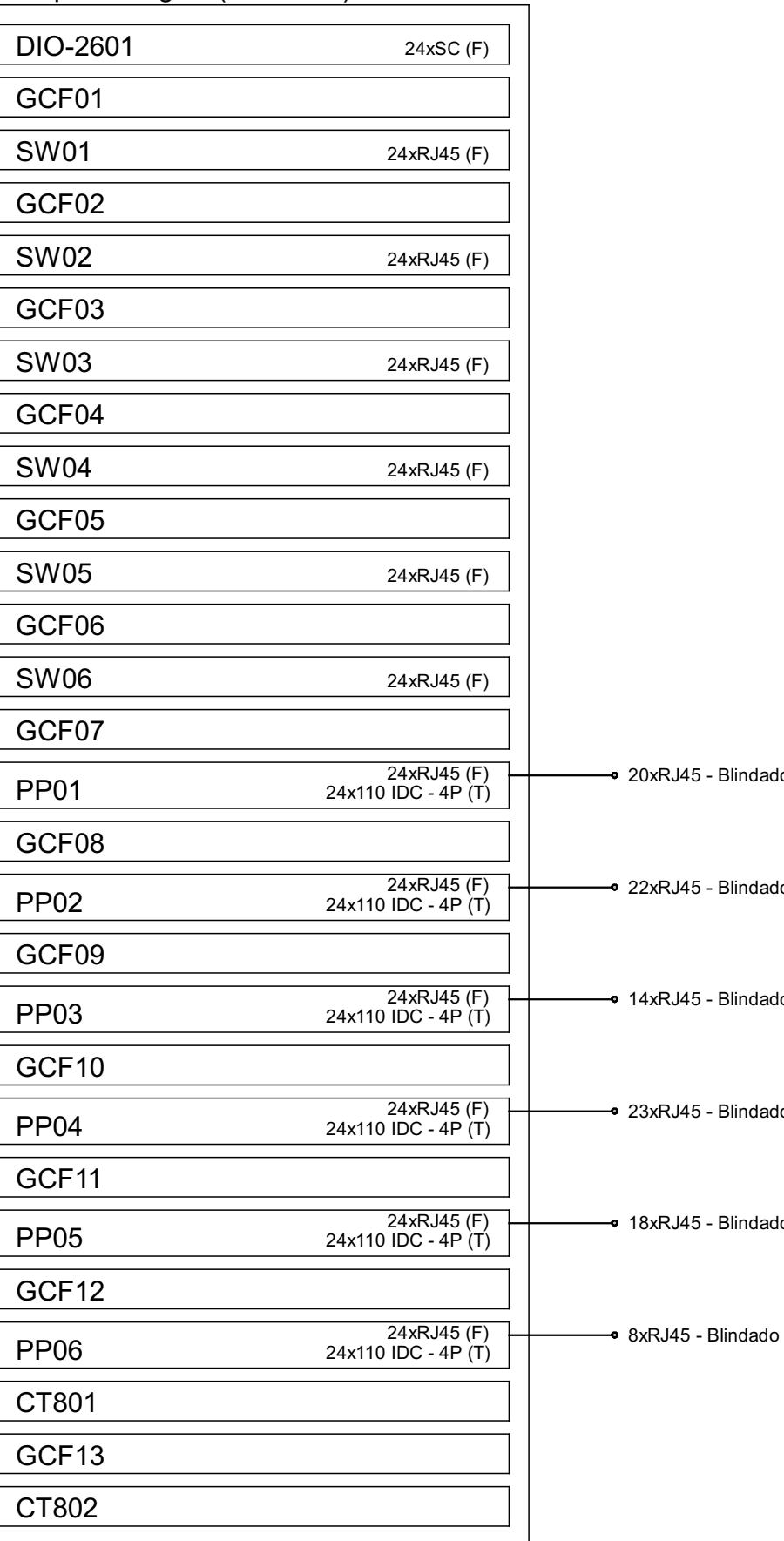
Esquema lógico (RACK-02) - TÉRREO



Plano de face do rack (RACK-01) - TÉRREO



Esquema lógico (RACK-01) - TÉRREO



Module
ENGENHARIA

RAZÃO SOCIAL: MODULO ENGENHARIA LTDA
CNPJ: 33.485.988/0001-21
ENDEREÇO: AVENIDA PAULISTA, 1636 - SALA 1504 - BELA VISTA - SÃO PAULO - SP
CEP: 01310-200
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TELEFONE: (11) 9306-8705

R00

06/03/2025

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ALTERAÇÃO

RESPONSÁVEL

PROJ.N.

PROJETO TERCERIZADO



ESTADO DO RIO GRANDE DO SUL
SECRETARIA DE OBRAS PÚBLICAS
SUBSECRETARIA DE OBRAS DA EDUCAÇÃO
DEPARTAMENTO DE PROJETOS DE PRÉDIOS DA EDUCAÇÃO
CENTRO ADMINISTRATIVO FERNANDO FERRARI- AVBORGESDE MEDEIROS, N1501-POA/RS

DIRETOR(A) DPPE

ENG. LEANDRO KRUPP

GERENTE DE PROJ. (DPPE)

ENG. LEANDRO KRUPP

Projetista

SERGIO DANIEL SOUSA SANTOS CREA RS N° PI41026

GERENTE:

PRISCILA BREYER

DOCUMENTAÇÃO

LUCCAS TONIN

OBRA

CRGIRD LAJEADO

ÁREA

2.551 M²

LOCAL:

RODOVIA ERS 130 KM 73.3 - ESQ. RUA JOÃO GOULART

MUNICÍPIO

LAJEADO / RS

PROJETO:

CABEAMENTO

ASSUNTO:

PLANO DE FACE DOS RACKS E
ESQUEMAS LÓGICOS

FOLHA:

3

ESCALA:

Como indicado

DATA:

06/03/2026

NOME ARQUIVO: 01-SPD-AP-GER-CENTRO DE COMANDO E CONTROLE