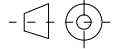









# FAJR.2

## 400/132KV GIS SUBSTATION

### PROTECTION & METERING SINGLE LINE DIAGRAM


D				
C				
B	<b>SH.M</b>		2023.08.27	FJR-MSG-MON-0035-2023/08/21
A	<b>SH.M</b>		2023.08.16	FJR-MSG-MON-0027-2023/08/14
Z	<b>SH.M</b>		1402.05.02	22/831418-02/04/28
REV.	DESIGNED	DRAWN	DATE	DESCRIPTION
		DATE:	NAME:	SCALE: -      STANDARD:
DESIGNED	1402.05.02	SH.M		<b>SUBJECT:</b> <b>FAJR.2</b> <b>400/132KV GIS SUBSTATION</b> <b>PROTECTION &amp; METERING SINGLE</b> <b>LINE DIAGRAM</b>
DRAWN	1402.05.02	SH.M		
CHECKED	1402.05.02	A.DEHGHAN		
APPROVED	1402.05.02	A.DEHGHAN		
CONTRACT NO: ---				DRAWING NO: MT-SUB-FJU-6275-DD-02-SJ-002
CONSULTANT:			CONTRACTOR:	CLIENT:
			 <b>MOHAM</b> <b>SHARGH</b> <b>CO.</b>	 <b>فردان گلف پاور انرژی</b> <b>Fardan Gulf Power Energy Co.</b>
Consultant NO.:				

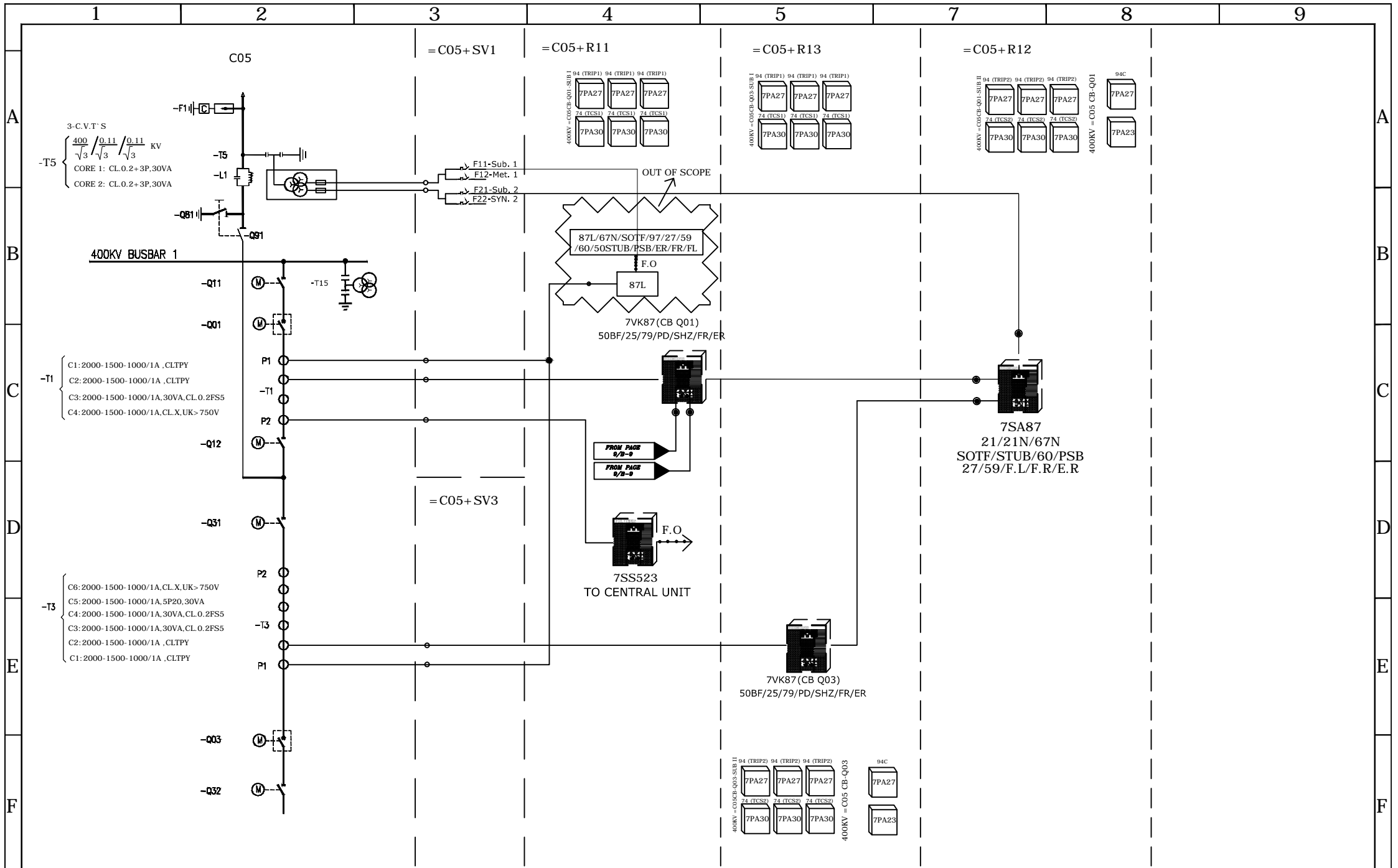
C			<b>Consultant:</b>  مونکو ایران Monenco Iran	<b>Client:</b>  شرکت پارس خداداد پارس Parsian Grid Powertransmission Industries Co PGPIC	<b>Contractor:</b>  MOHAM SHARGH COMPANY		<b>Name</b>	<b>Date</b>	<b>Title:</b>  LIST OF CONTENTS	<b>Project:</b> FAJR.2 400/132/KV GIS SUBSTATION PROTECTION&METERING SINGLE LINE DIAGRAM	<b>Scale: –</b>
B	PJR-MSC-MON-0035-2023/08/21	2023/08/27				DESIGNED	SH.M	1402.05.02			<b>Size:</b> A4
A	PJR-MSC-MON-0027-2023/08/14	2023/08/16				DRAWN	SH.M	1402.05.02			
Z	22/831418-02/04/28	1402.05.02				CHECKED	A.DEHGHAN	1402.05.02		Consultant NO.:	<b>Sheet:</b> 1
REV.	Description.	DATE				APPROVED	A.DEHGHAN	1402.05.02		DWG NO: MT-SUB-FJU-6275-DD-02-SJ-002	Contract No:

	1	2	3	4	5	7	8	9
A	2	TIME DELAY RELAY	87N	RESTRICTED EARTH FAULT RELAY				
	21/ 21N	DISTANCE RELAY WITH THREE ZONES	87T	TRANS. DIFFERENTIAL PROTECTION (BIASED DIFF.)				
	25	SYNCHRO-CHECK RELAY	81 LSH	FREQUENCY LOAD SHEDDING			MWH	ACTIVE ENERGY METER (BOTH DIRECTIONS) (MULTI TARRIF,CLASS 0.2)
B	27	UNDER(ZERO) VOLTAGE RELAY	94	TRIP RELAY			MVARR	REACTIVE ENERGY METER (BOTH DIRECTIONS) (MULTI TARRIF,CLASS 0.2)
	49	THERMAL OVER LOAD	94X	AUX. TRIP RELAY WITH HIGH SPEED CONTACT			VAR	VARMETER
	50	INSTANTANEOUS OVER CURRENT RELAY	94Y	AUX. TRIP RELAY WITH FLAG			A	AMPERMETER
	50NS	SENSITIVE OVER CURRENT	97	FUSE FAILURE (IN DISTANCE RELAY)			V	VOLTMETER
C	50/51	INSTANTANEOUS AND INVERSE TIME OVER CURRENT RELAY	AVR	AUTOMATIC VOLTAGE REGULATOR			MW	MEGAWAT METER
	50N/ 51N	INSTANTANEOUS AND INVERSE EARTH FAULT RELAY	C.R	CLOSE RELAY			MVA	MEGAVAR METER
	51	INVERSE TIME OVER CURRENT RELAY	EF	EVENT RECORDER			VS	VOLTAGE SELECTION
D	51 LSH	CURRENT LOAD SHEDDING	FR	FAULT RECORDER				
	59	OVER VOLTAGE RELAY	F.F.	FUSE FAILURE RELAY				
	67	DIRECTIONAL OVER CURRENT RELAY WITH INVERSE TIME CHARACTRISTIC	F.L	FAULT LOCATOR				
E	67N	DIRECTIONAL EARTH FAULT RELAY	M.C.	MEASURING CENTER				
	79	AUTO RECLOSE RELAY SINGLE SHOT 1 & 3 PHASE	PSB	POWER SWING BLOCKING				
	86	CLOSE LOCKOUT RELAY	SOFT	SWITCH ON TO FAULT				
F	87B	BUSBAR PROT. (HIGH IMPEDANCE)	TCS	TRIP CIRCUIT SUPERVISION RELAY				
			H/L SET	HIGH SET LOW SET				

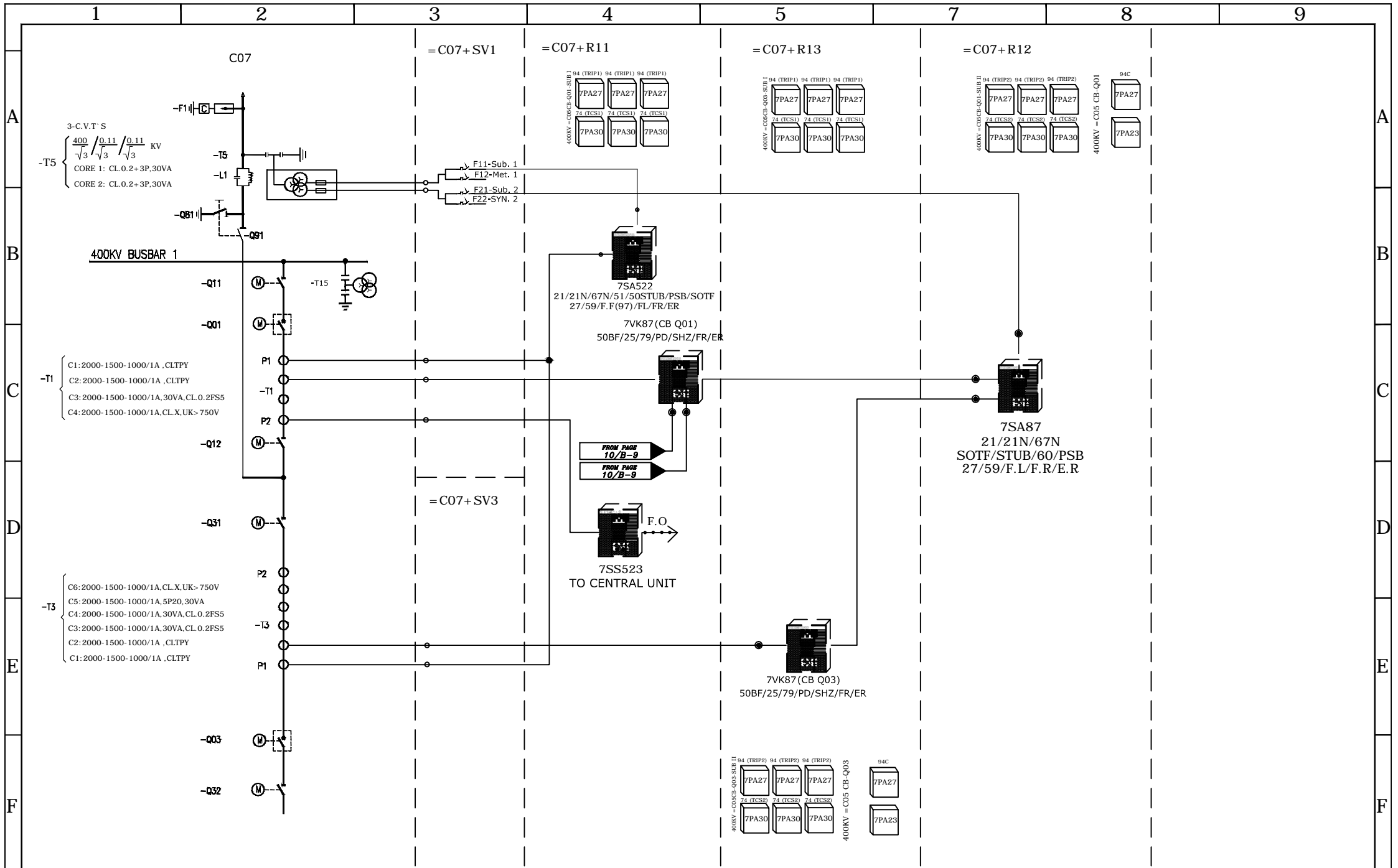
### PANELS





- +R PROTECTION PANEL
- +W CONTROL PANEL
- +SV MARSHALING CUBICLE
- +AVR AUTOMATIC VOLTAGE REGULATOR PANEL
- +Q MEASUREMENT PANEL

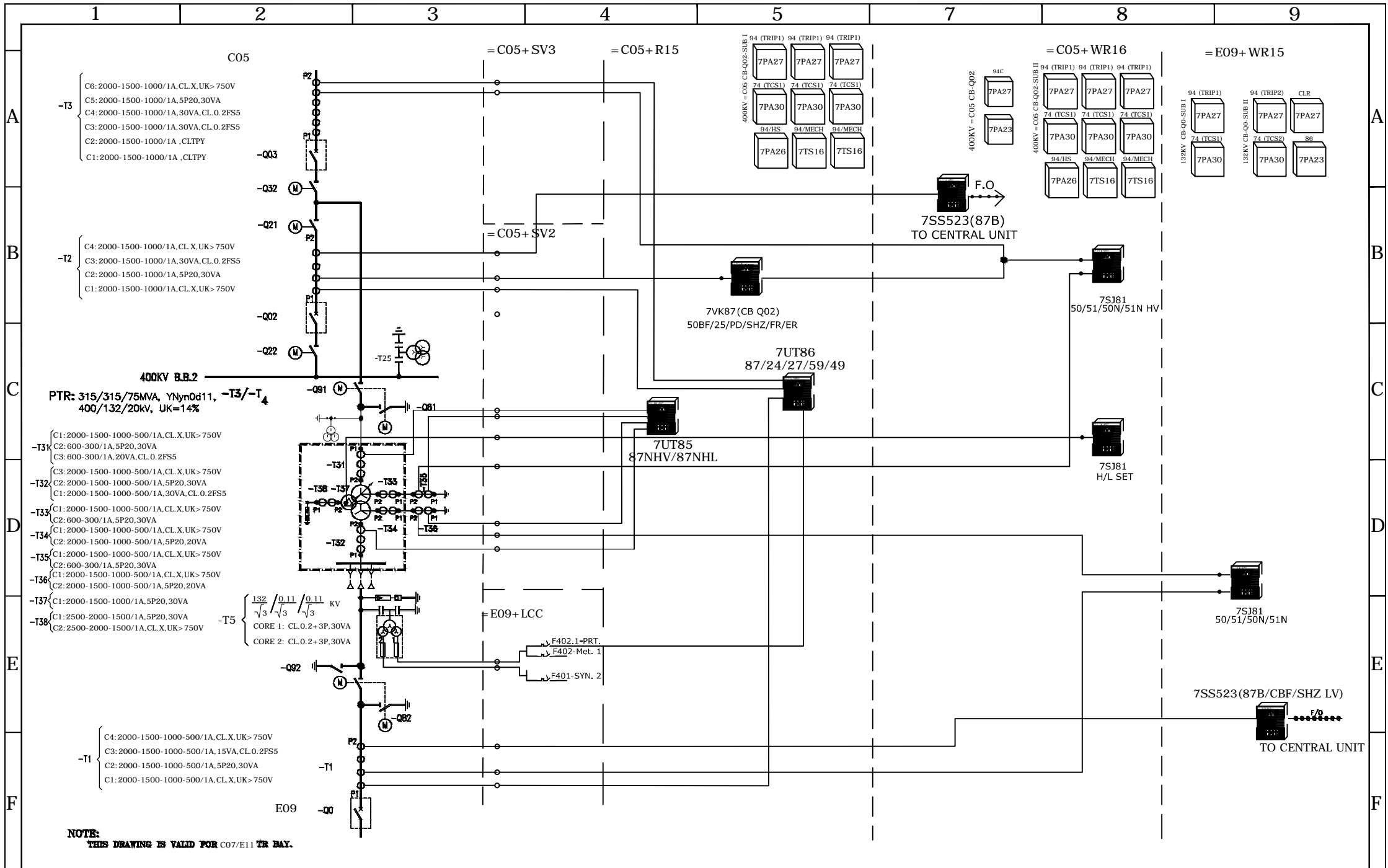
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B	PJR-MSC-MON-0035-2023/08/21	2023/08/27				DESIGNED	SH.M	1402.05.02		400/132/KV GIS SUBSTATION	Size: A4
A	PJR-MSC-MON-0027-2023/08/14	2023/08/16				DRAWN	SH.M	1402.05.02		PROTECTION&METERING SINGLE LINE DIAGRAM	
Z	22/831418-02/04/28	1402.05.02				CHECKED	A.DEHCHAN	1402.05.02		Consultant NO.:	Sheet: 2
REV.	Description.	DATE				APPROVED	A.DEHCHAN	1402.05.02	DWG NO: MT-SUB-FJU-6275-DD-02-SJ-002	Contract No:	Next Sheet: 3



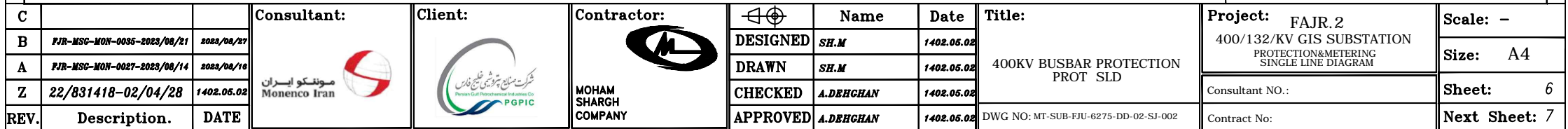
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A	PJR-MSC-MON-0027-2023/08/14	2023/08/14				DRAWN	SH.M	1402.05.02	400/132/KV GIS SUBSTATION	Size: A4
Z	22/831418-02/04/28	1402.05.02	مونسکو ایران Monenco Iran	شرکت پارس پارس Parsian Gulf Petrochemical Industries Co PGPIC	MOHAM SHARGH COMPANY	CHECKED	A.DEHCHAN	1402.05.02	PROTECTION&METERING SINGLE LINE DIAGRAM	Sheet: 3
REV.	Description.	DATE				APPROVED	A.DEHCHAN	1402.05.02	Consultant NO.:	Next Sheet: 4
								DWG NO: MT-SUB-FJU-6275-DD-02-SJ-002	Contract No:	



C			<b>Consultant:</b>   موننکو ایران Monenco Iran	<b>Client:</b>   شرکت پارس گاز و پتروشیمی پارس Parsian Gas Petrochemical Industries Co PGPIC	<b>Contractor:</b>    MOHAM SHARGH COMPANY		<b>Name</b>	<b>Date</b>	<b>Title:</b>  400KV LINE(=C07) PROTECTION SLD	<b>Project:</b> FAJR.2 400/132/KV GIS SUBSTATION PROTECTION&METERING SINGLE LINE DIAGRAM	<b>Scale:</b> –
B	PJR-MSC-MON-0035-2023/08/21	2023/08/21				DESIGNED	SH.M	1402.05.02			<b>Size:</b> A4
A	PJR-MSC-MON-0027-2023/08/14	2023/08/16				DRAWN	SH.M	1402.05.02			
Z	22/831418-02/04/28	1402.05.02				CHECKED	A.DEHCHAN	1402.05.02			
REV.	Description.	DATE				APPROVED	A.DEHCHAN	1402.05.02			DWG NO: MT-SUB-FJU-6275-DD-02-SJ-002

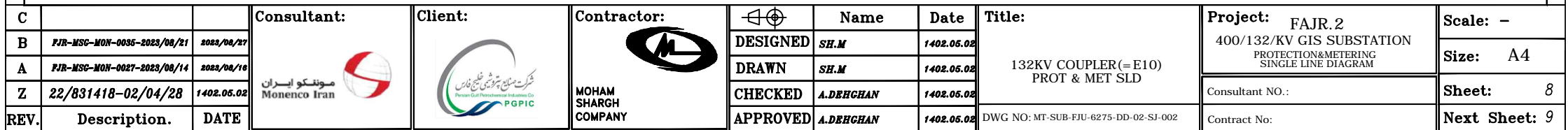


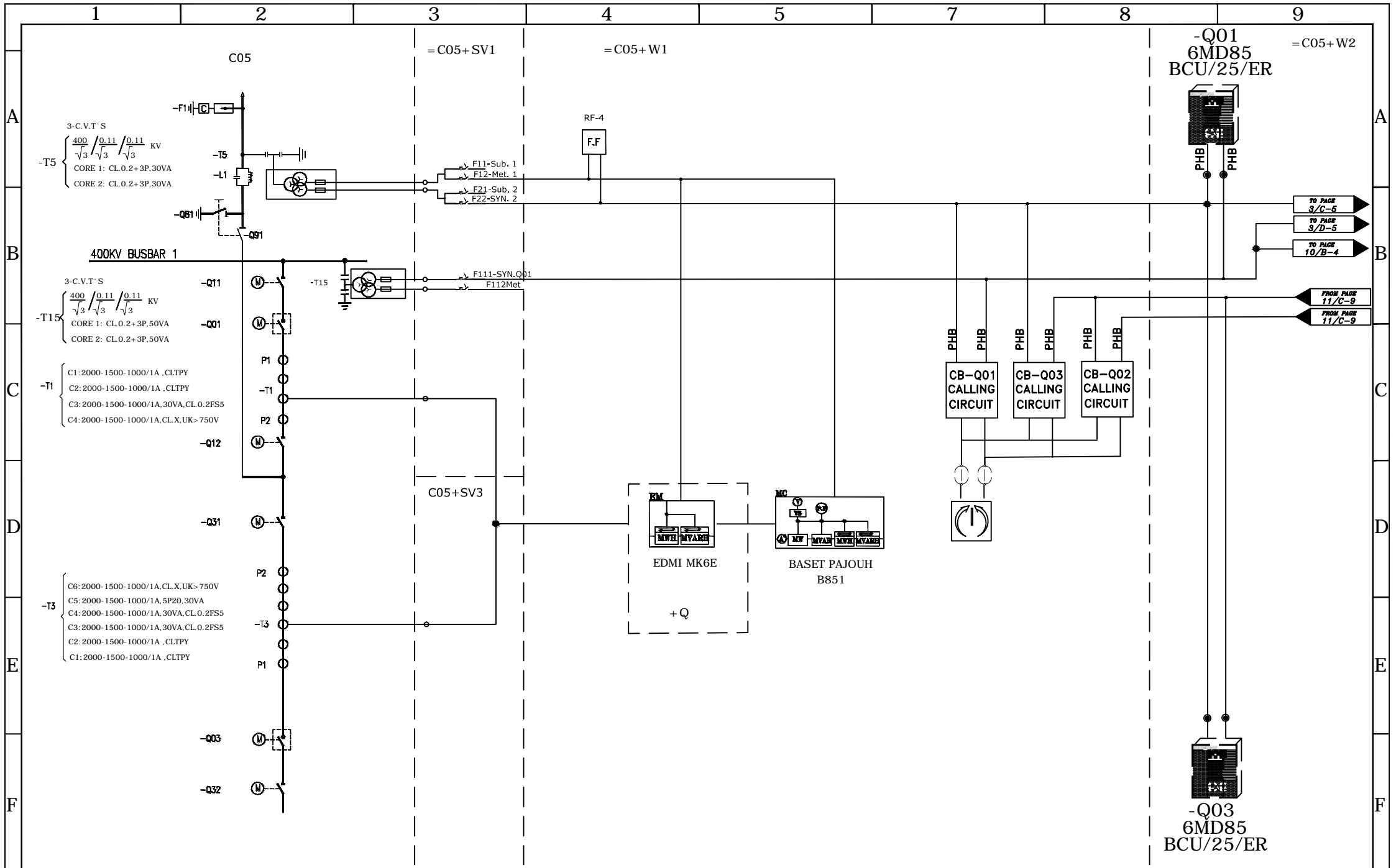
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B	PJR-MSC-MON-0035-2023/08/21	2023/08/27				DRAWN	SH.M	1402.05.02		FAJR.2	
A	PJR-MSC-MON-0027-2023/08/14	2023/08/16				CHECKED	A.DEHCHAN	1402.05.02	400/132KV TRANS(=C05&=E09)	400/132/KV GIS SUBSTATION	Size: A4
Z	22/831418-02/04/28	1402.05.02				APPROVED	A.DEHCHAN	1402.05.02	PROT SLD	PROTECTION&METERING SINGLE LINE DIAGRAM	Sheet: 5
REV.	Description.	DATE							DWG NO: MT-SUB-FJU-6275-DD-02-SJ-002	Contract No:	Next Sheet: 6















C			<b>Consultant:</b>   مونئكو ايران Monenco Iran	<b>Client:</b>   شرکت ملی گاز PGPIC	<b>Contractor:</b>   MOHAM SHARGH COMPANY		<b>Name</b>	<b>Date</b>	<b>Title:</b>  400KV LINE(=C05) METERING SLD	<b>Project:</b> FAJR.2 400/132/KV GIS SUBSTATION PROTECTION&METERING SINGLE LINE DIAGRAM	<b>Scale: -</b>	
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A	PJR-MSC-MON-0027-2023/08/14	2023/08/16				DRAWN	SH.M	1402.05.02				
Z	22/831418-02/04/28	1402.05.02				CHECKED	A.DEHCHAN	1402.05.02				Sheet: 9
REV.	Description.	DATE				APPROVED	A.DEHCHAN	1402.05.02				DWG NO: MT-SUB-FJU-6275-DD-02-SJ-002
									Contract No:			

