



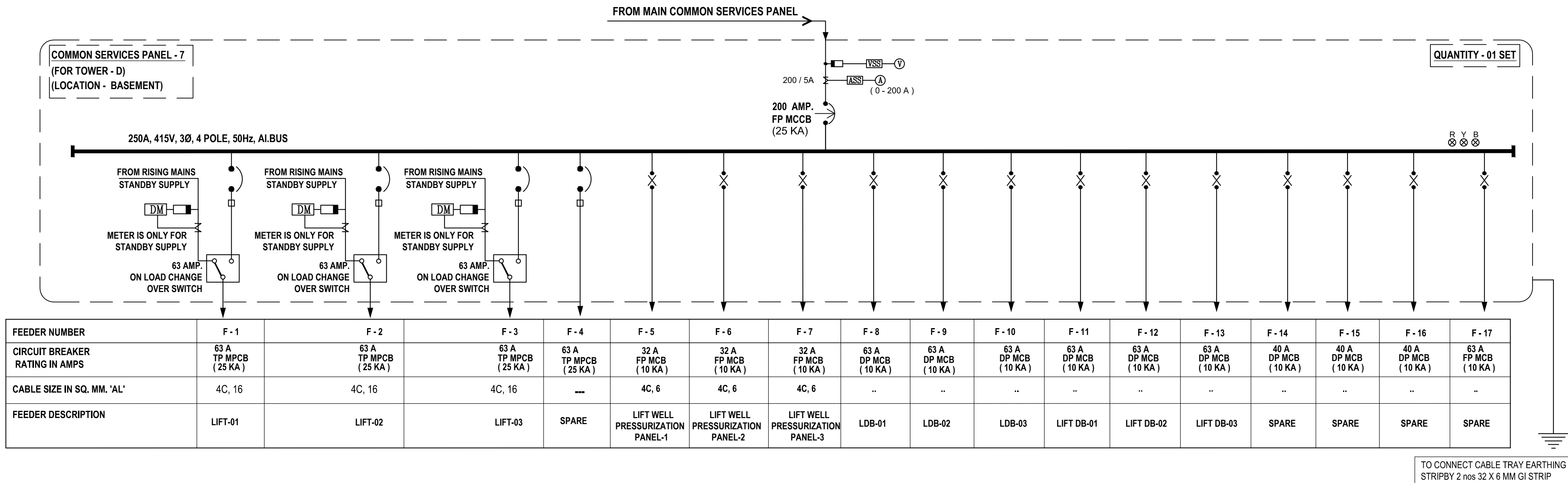
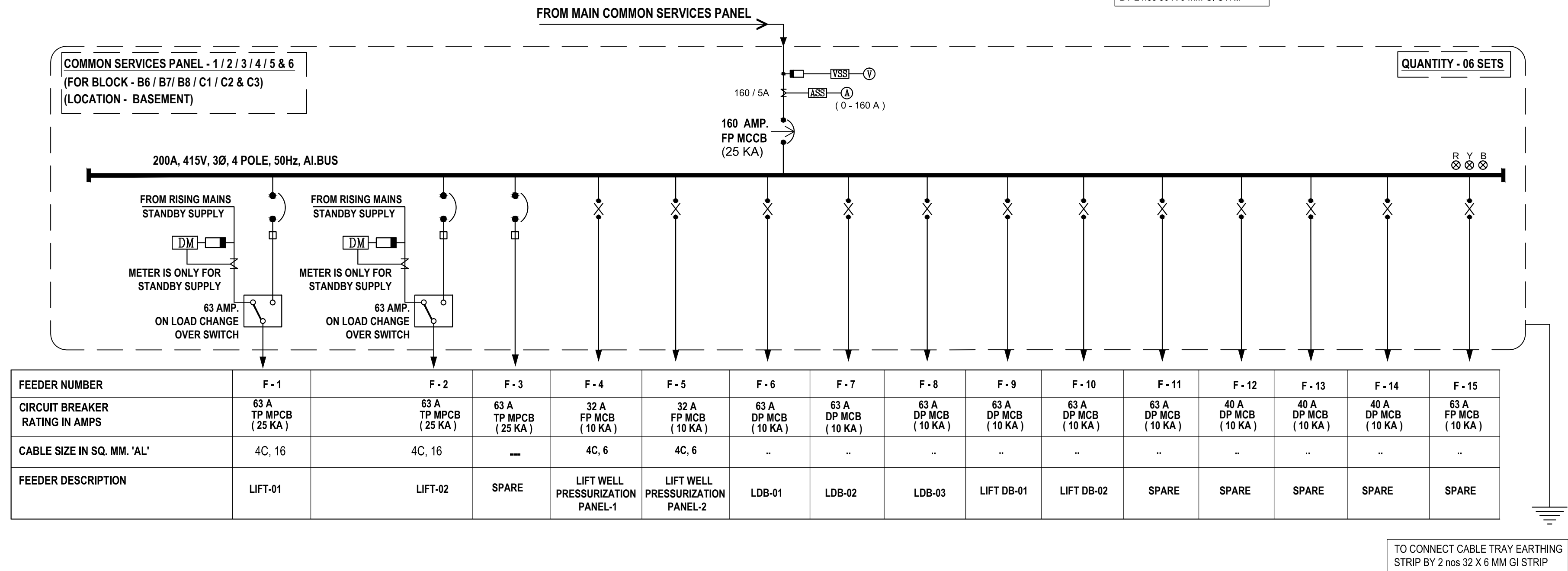
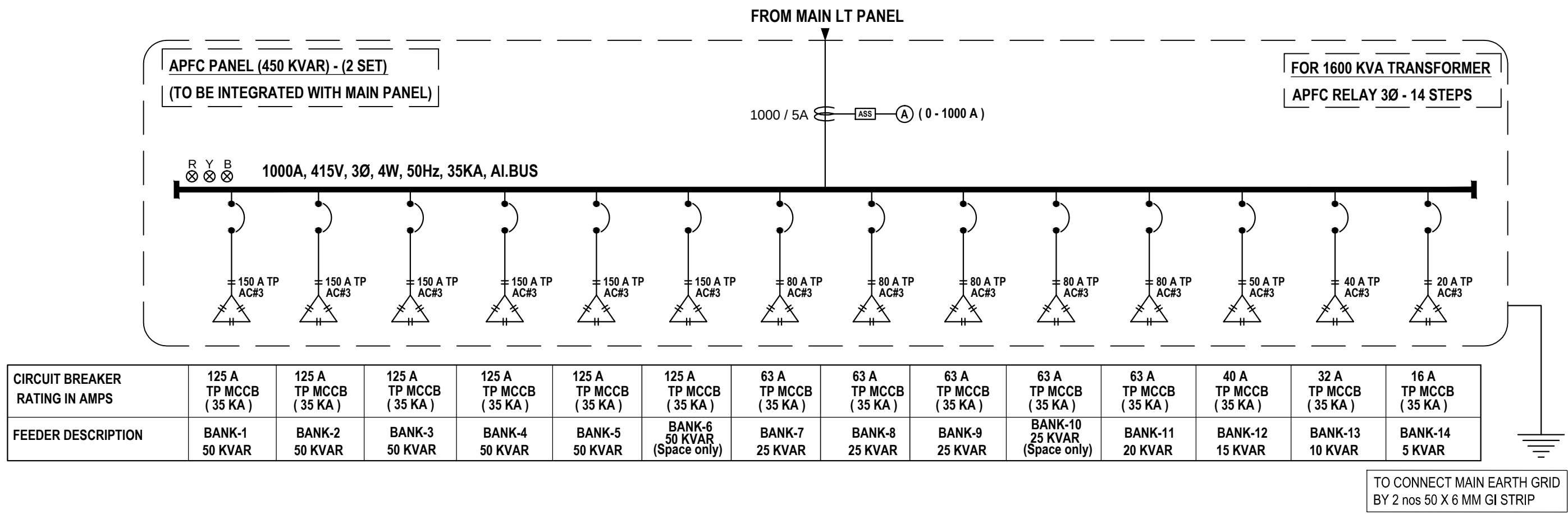
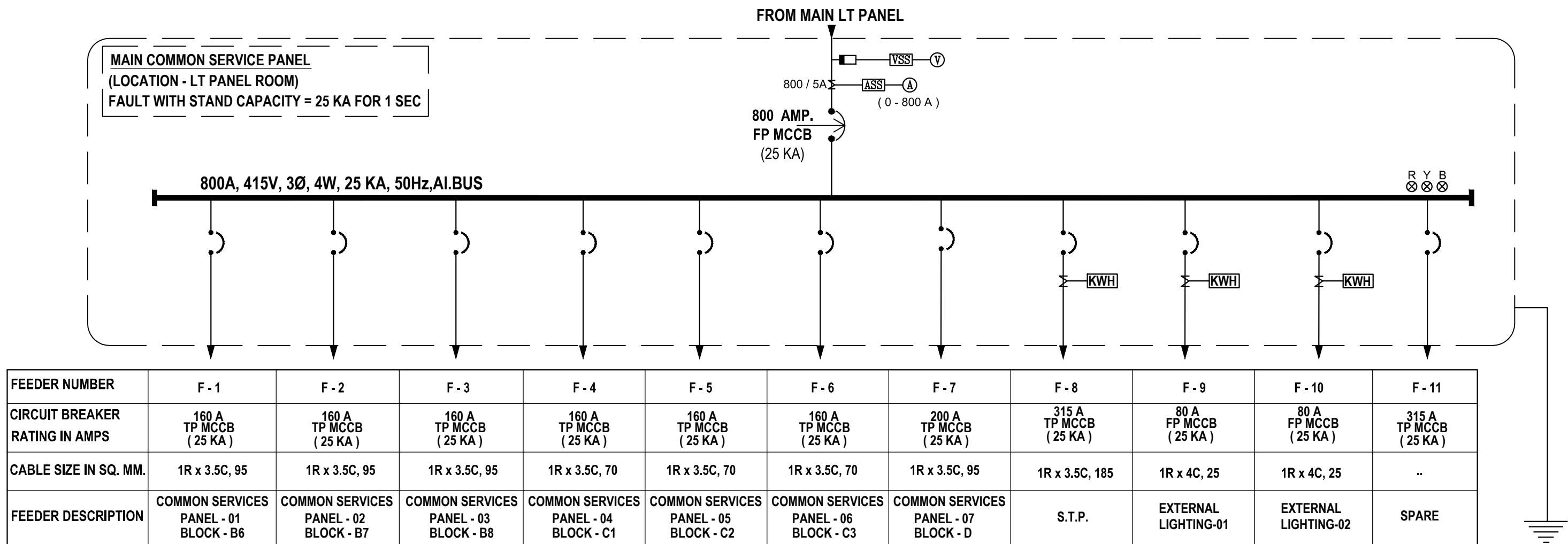
- 1) The PLC shall have a provision of Interlocking between different Incomers & Bus couplers to avoid Paralleling of two different supplies from Transformer & DG sets
- 2) Logic to AUTO START & AUTO STOP for each DG sets.
- 3) Taking data from Energy Analysers and issuing and selecting starting command for DG set as per above logic. Further it shall also be possible to START/STOP DG sets in Manual/Test Mode.
- 4) Paralleling of DG sets have not been envisaged.
- 5) In case of any discrepancy in interlocking scheme inform consultant before execution.

Interlocking Scheme For PLC load manager.

Conditions		Breaker Position									
		EQUIP.	DG - 01 500 KVA	B/C	DG - 02 500 KVA	T/F - 01 (1600 KVA)	B/C	T/F - 02 (1600 KVA)	DG - 03 500 KVA	B/C	DG - 04 500 KVA
		ACB No.	1	7	2	3	8	4	5	9	6
Mains "ON"	Under Normal Condition. Total Load is at Transformers.		OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
	When max. demand Load is upto 340 KW then load transferred to DG - 01.		ON	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
	When max. demand Load is upto 340 KW & DG - 01 fails to starts, then Load transferred to DG - 02.		OFF	ON	ON	OFF	ON	OFF	OFF	ON	OFF
	When max. demand Load is upto 340 KW, & DG - 02 also fails to starts, then Load transferred to DG - 03.		OFF	ON	OFF	OFF	ON	OFF	ON	ON	OFF
	When max. demand Load is upto 340 KW, & DG - 03 also fails to starts, then Load transferred to DG - 04.		OFF	ON	OFF	OFF	ON	OFF	OFF	ON	ON
	When combined max. demand load of Bus section 1 & 2 is upto 340 KW then Load of Bus section 1 & 2 transferred to DG - 01, Load of Bus section - 3 is at DG - 03 & Load of Bus section - 4 is at DG - 04.		ON	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
	When combined max. demand load of Bus section 1 & 2 is upto 340 KW & DG - 01 fail to start then load of Bus section - 1 & 2 transferred to DG - 02, Load of Bus section - 3 is at DG - 03 & Load of Bus section - 4 is at DG - 04.		OFF	ON	ON	OFF	OFF	OFF	ON	OFF	ON
	When combined max. demand load of Bus section 2 & 3 is upto 340 KW then Load of Bus section 2 & 3 transferred to DG - 02, Load of Bus section - 1 is at DG - 01 & Load of Bus section - 4 is at DG - 04.		ON	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
	When combined max. demand load of Bus section 2 & 3 is upto 340 KW & DG - 02 fail to start then load of Bus section - 2 & 3 transferred to DG - 03, Load of Bus section - 1 is at DG - 01 & Load of Bus section - 4 is at DG - 04.		ON	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
	When combined max. demand load of Bus section 3 & 4 is upto 340 KW then Load of Bus section 3 & 4 transferred to DG - 03, Load of Bus section - 1 is at DG - 01 & Load of Bus section - 2 is at DG - 02.		ON	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
Mains Failure	When combined max. demand load of Bus section 3 & 4 is upto 340 KW & DG - 03 fail to start then load of Bus section - 3 & 4 transferred to DG - 04, Load of Bus section - 1 is at DG - 01 & Load of Bus section - 2 is at DG - 02.		ON	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
	When max. demand Load exceeds from 340 KW and not fulfill any condition shown above, then all the four DG's shall run independently at separate bus bar. ie. DG-01 at bus section 01, DG-02 at bus section -2, DG -3 at bus section-3 & DG -4 at bus section-4.		ON	OFF	ON	OFF	OFF	OFF	ON	OFF	ON

- 1) All ACB should have $I_{cs} = I_{cu} = I_{cw} = 50 \text{ kA}$ for 1 sec, fully rated at 50 deg C ambient temperature
- 2) All ACB's shall have an inbuilt facility of O/C, S/C, Instantaneous S/C & Earth fault protection
- 3) All ACB's shall have Auxiliary switches with 4NO + 4NC contacts.
- 4) All Incoming ACB's shall facility with LCD / LED display for event history & measurement of current parameters.
- 5) All MCCB shall be microprocessor based with inbuilt O/L & S/C release with E/F protection
- 6) All MCCB's shall be $I_{cs} = 100\% I_{cu}$,
- 7) All MCCB's shall have adjustable O/L & S/C trip setting as per load requirement

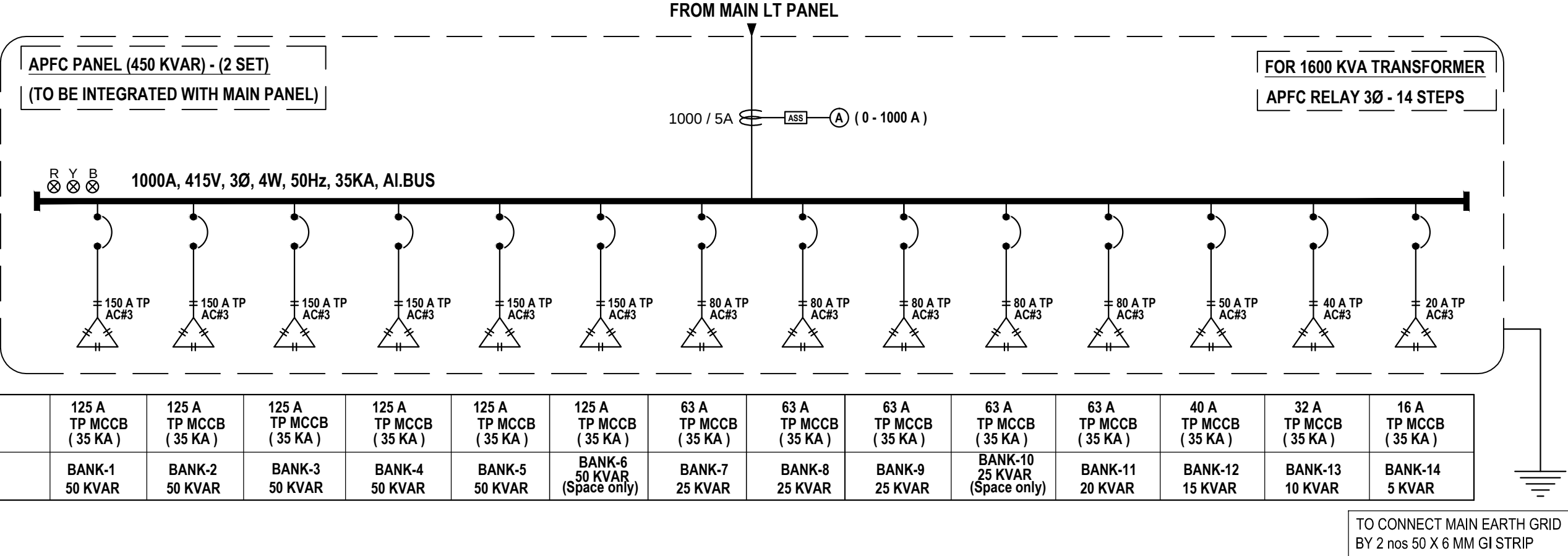
1 No. CT's TO BE PROVIDED IN LOOSE CONDITION BY THE PANEL MANUFACTURER TO THE CLIENT FOR REF PROTECTION.



LEGENDS	
SYMBOLS	DESCRIPTION
	ON LOAD CHANGE OVER SWITCH
	HRC FUSES
	(MCCB) MOULDED CASE CIRCUIT BREAKER
	AMMETER
	VOLTMETER
	AMMETER SELECTOR SWITCH
	VOLTMETER SELECTOR SWITCH
	DUAL ENERGY METER WITH RS 485 COMM. PORT
	KILO WATT HOUR METER
	INDICATING LAMP
	M.C.B. (MINIATURE CIRCUIT BREAKER)
	PUSH BUTTON
	MOTOR PROTECTION TYPE CIRCUIT BREAKER

R0	27.07.2015	GFC ISSUED.
rev. no.	date	revision
project		
GROUP HOUSING "GARDENIA GLORY"		
AT PLOT NO.-GH-01,SECTOR- 46, NOIDA.		
FOR - M/S GARDENIA DEVELOPERS		
title		
ELECTRICAL DRAWING (SUBSTATION-02)		
(FOR BLOCK - B6, B7, B8, C1, C2, C3 & D)		
subtitle		
SUB PANEL SCHEMATIC DIAGRAM		
(SHEET 02 OF 02)		
drawing released for		
☐ APPROVAL	☐ SUBMISSION	
☐ TENDER COPY	☒ CONSTRUCTION	
drg. no.	GG / ELEC / EXT. / 02-02	drawn by
		M. Firoz
scale	N.T.S. @ A1	designed by
		Ateeq Ur Rehman
date	July 2015	checked by
		Anand Havelia
architects		
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R0	27.07.2015	GFC ISSUED.
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project
GROUP HOUSING "GARDENIA GLORY"
AT PLOT NO.-GH-01,SECTOR- 46, NOIDA.

drg. no.
GG / ELEC / EXT. / 02/03

released for
CONSTRUCTION

architects

DEEPAK MEHTA & ASSOCIATES

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title
**SCHEMATIC DIAGRAM
FOR CAPACITOR PANEL**

date
July 2015

designed by
Ateeq Ur Rehman

scale
N.T.S. @ A3

ckd by
Anand Havelia