

HVAC DRAWING LIST

ITEM	DRAWING NO.	DRAWING TITLE	DATE & REVISION							
			14	3	16	24	18	20	3	3
			June	July	October	October	February	February	April	July
			2019	2019	2019	2019	2020	2020	2020	2020
1	21628-00-TN-AC-DL-4000	HVAC DRAWING LIST	Rev.0	Rev.A	Rev.B	Rev.C	Rev.D	Rev.E	Rev.F	Rev.G
2	21628-00-TN-AC-EQ-4600	HVAC EQUIPMENT SCHEDULE	Rev.0		Rev.A	Rev.B		Rev.C	Rev.D	
3	21628-00-TN-AC-SC-4700	HVAC SCHEMATIC	Rev.0	Rev.0						
3	21628-00-TN-AC-FS-4800	FUEL SCHEMATIC							Rev.0	
4	21628-00-TN-AC-AC-4400	HVAC GF AIR-CONDITIONING LAYOUT	Rev.0	Rev.A	Rev.B	Rev.C			Rev.D	Rev.E
5	21628-00-TN-AC-AC-4401	HVAC 1F AIR-CONDITIONING LAYOUT	Rev.0	Rev.A	Rev.B	Rev.C			Rev.D	
6	21628-00-TN-AC-AC-4402	HVAC URF AIR-CONDITIONING LAYOUT	Rev.0	Rev.A						
7	21628-00-TN-AC-VE-4403	HVAC GF VENTILAION LAYOUT	Rev.0	Rev.A		Rev.B	Rev.C	Rev.D	Rev.E	
8	21628-00-TN-AC-VE-4404	HVAC 1F VENTILAION LAYOUT	Rev.0	Rev.A		Rev.B		Rev.C		
9	21628-00-TN-AC-TD-4900	HVAC TYPICAL INSTALLATION DETAIL-1	Rev.0							
10	21628-00-TN-AC-TD-4901	HVAC TYPICAL INSTALLATION DETAIL-2	Rev.0						Rev.A	

General Legend:			Drawing Notes:			Drawing Title:					
Drawing No.:			<div>GK Engineering</div> <div>St.261, Sangkat Boeung Salang</div> <div>Phnom Penh, CAMBODIA</div> <div>www.gkengineering.pro</div>			<div>HVAC</div> <div>DRAWING LIST</div>					
21628-00-TN-AC-DL-4000 Rev.G											
Project Name:		Client:	Supported & Funded By:	Implementation:	Design:	Project No.: SUB No.: Stage: Discipline: Subject: Seq No.:					
Project Name Line 1		Client Name Line 1	Donor Name Line 1	UNOPS, Hub - Office		21628 00 TN AC DL 4000					
Project Name Line 2		Client Name Line 2	Donor Name Line 2	Address Line 1:		Drawn: Check: Appr.: Rev.: Size: Scale: Issue Date:					
Location		Location	Donor Name Line 3	Address Line 2:		GK GK GK G A3 1:100@A3 03/07/2020					
				Address Line 3:		All information in this document is the property of UNOPS and can't be copied anywhere but in this project without prior written consent of UNOPS.					
				City, Country							

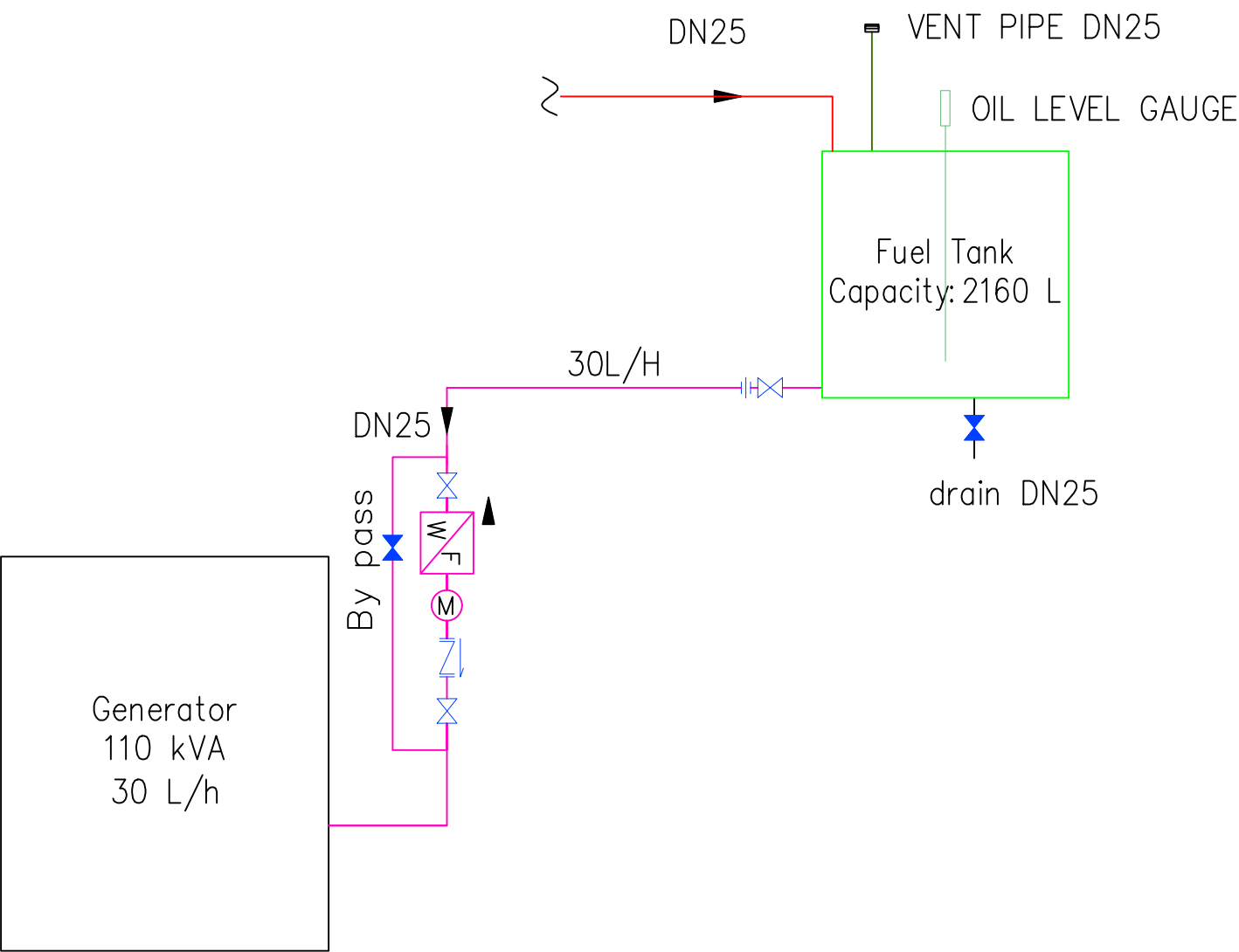
AIR CONDITIONING EQUIPMENT SCHEDULE										
LOCATION	FCU CODE	EQUIPMENT SELECTION						ELECTRICAL SUPPLY		
		COOLING CAPACITY						POWER SOURCE	POWER CONSUMPTION	
		kW	INDOOR TEMPERATURE	OUTDOOR TEMPERATURE	TYPES	SYSTEM TYPES	Q'ty per Floor	Ø/V/Hz	UNIT	TOTAL
			°CDB/°CWB	°CDB/WB			Unit		(kw)	(kw)
GF										
CONFERENCE ROOM	FCU-GF-01/02	8.2	25/18	35/27	Ceiling Cassette	Single Split Inverter	2	1/240/50	2.93	5.86
WAITING AREA	FCU-GF-03/06	5.0	25/18	35/27	Wall mounted	Single Split Inverter	2	1/240/50	1.69	3.38
MEETING ROOM 01	FCU-GF-04	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9	0.9
BREAST FEEDING AREA	FCU-GF-05	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9	0.9
HEAD OF ADMIN	FCU-GF-07	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9	0.9
SOCIAL PANTRY	FCU-GF-09	3.6	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	1.3	1.3
ADMIN AND FINANCE TEAM	FCU-GF-08	5.0	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	1.69	1.69
SECURITY ROOM	FCU-GF-10	2.5	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9	0.9
1F										
FAO REPRESENTATIVE	FCU-1F-01	3.6	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	1.3	1.3
FAO'S REPRESENTATIVE SECURETY	FCU-1F-02	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9	0.9
MEETING ROOM 02	FCU-1F-03	5.0	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	1.69	1.69
MEETING ROOM 03	FCU-1F-04	5.0	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	1.69	1.69
SERVER ROOM	FCU-1F-05/06	3.6	25/18	35/27	Wall mounted	Single Split Inverter	2	1/240/50	1.3	2.6
HEAD OF OPS	FCU-1F-09	3.6	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	1.3	1.3
OPERATION UNIT SENIOR STAFF	FCU-1F-12	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9	0.9
HEAD OF PROGRAME	FCU-1F-10	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9	0.9
PROGRAMME UNIT SENIOR STAFF	FCU-1F-11	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9	0.9
OFFICE AREA	FCU-1F-07/08	8.2	25/18	35/27	Ceiling Cassette	Single Split Inverter	1	1/240/50	2.93	2.93
		5.0	25/18	35/27	Ceiling Cassette	Single Split Inverter	1	1/240/50	1.69	1.69

DESIGNATION	AIRFLOW	QTY	TOTAL AIR FLOW	ESP	TYPE	ELECTRICAL SUPPLY		
	L/S	U	L/S	Pa		PHASE	POWER INPUT	
							UNIT	TOTAL
							kW	kW
EF-GF-01	100	1	100	150	Mix flow fan	1	0.055	0.055
EF-GF-02	125	1	125	150	Mix flow fan	1	0.055	0.055
FAF-GF-01	100	1	100	150	Mix flow fan	1	0.055	0.055
FAF-GF-02	125	1	125	150	Mix flow fan	1	0.055	0.055
EF-GF-03	25	1	25	10	WALL EXHAUST FAN	1	0.018	0.018
EF-1F-01	160	1	160	150	Mix flow fan	1	0.115	0.115
FAF-1F-01	160	1	160	150	Mix flow fan	1	0.115	0.115

General Legend:					Drawing Notes:					Drawing Title:									
Drawing No.:		21628-00-TN-AC-EQ-4600 Rev.D			D		03/04/2020		Revised schedules		GK		HVAC EQUIPMENT SCHEDULE						
C					20/02/2020		Revised schedules		GK										
B					24/10/2019		Third Issue		GK										
A		04/07/2019		Second Issue		GK													
0		20/06/2019		First Issue		GK		Project No.:		SUB No.:		Stage:		Discipline:		Subject:		Seq No.:	
Rev.		Date		Description		Approved		21628		00		TN		AC		EQ		4600	
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Project Name: Project Name Line 1 Project Name Line 2 Location					Client: Client Name Line 1 Client Name Line 2 Location		Supported & Funded By: Donor Name Line 1 Donor Name Line 2 Donor Name Line 3		Implementation: UNOPS ,Hub - Office Address Line 1, Address Line 2, Address Line 3, City, Country		Design: GK Engineering St.261, Sangkat Boeung Salang Phnom Penh, CAMBODIA www.gkengineering.pro		GK ENGINEERING						

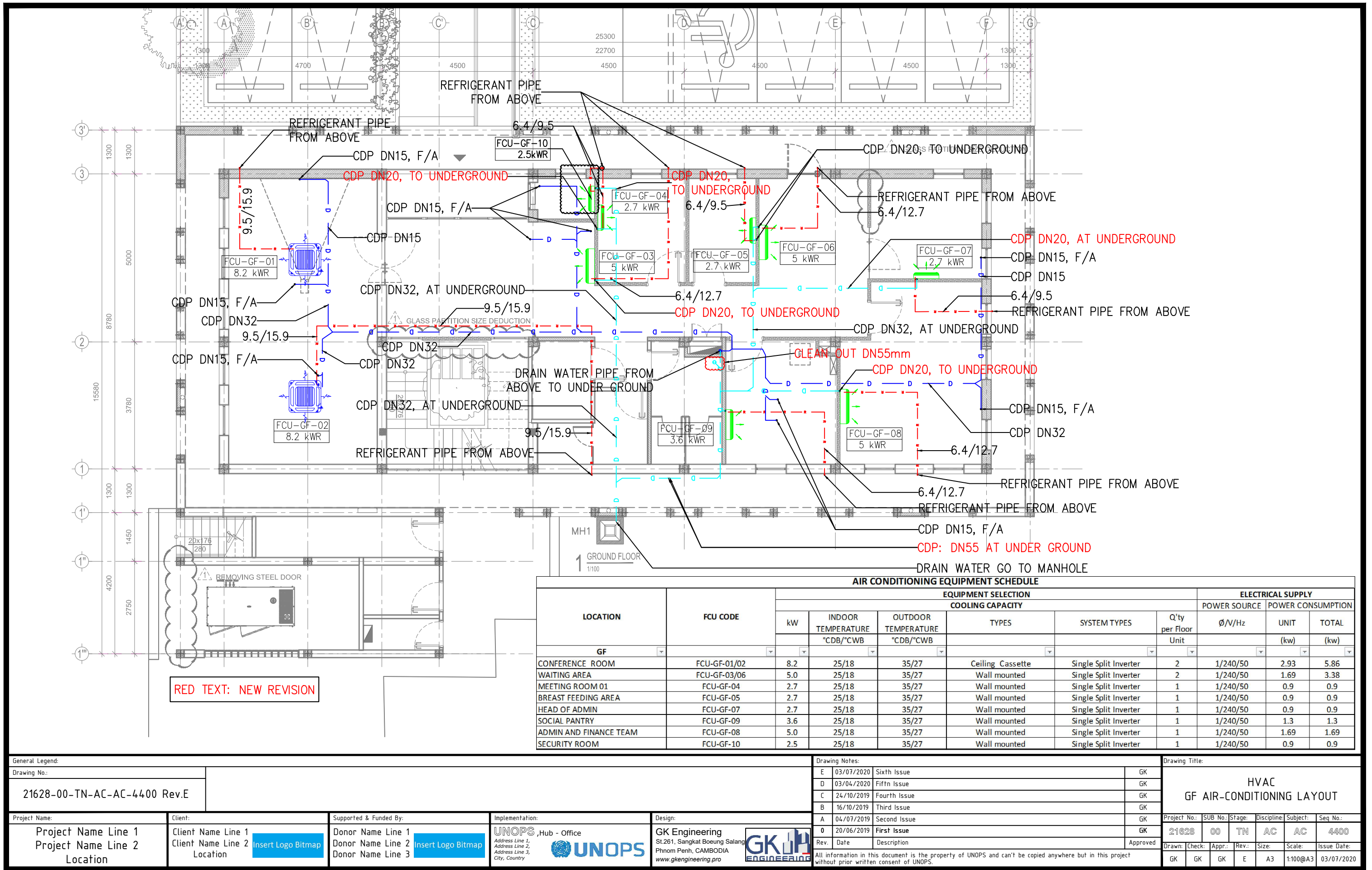
Lengend

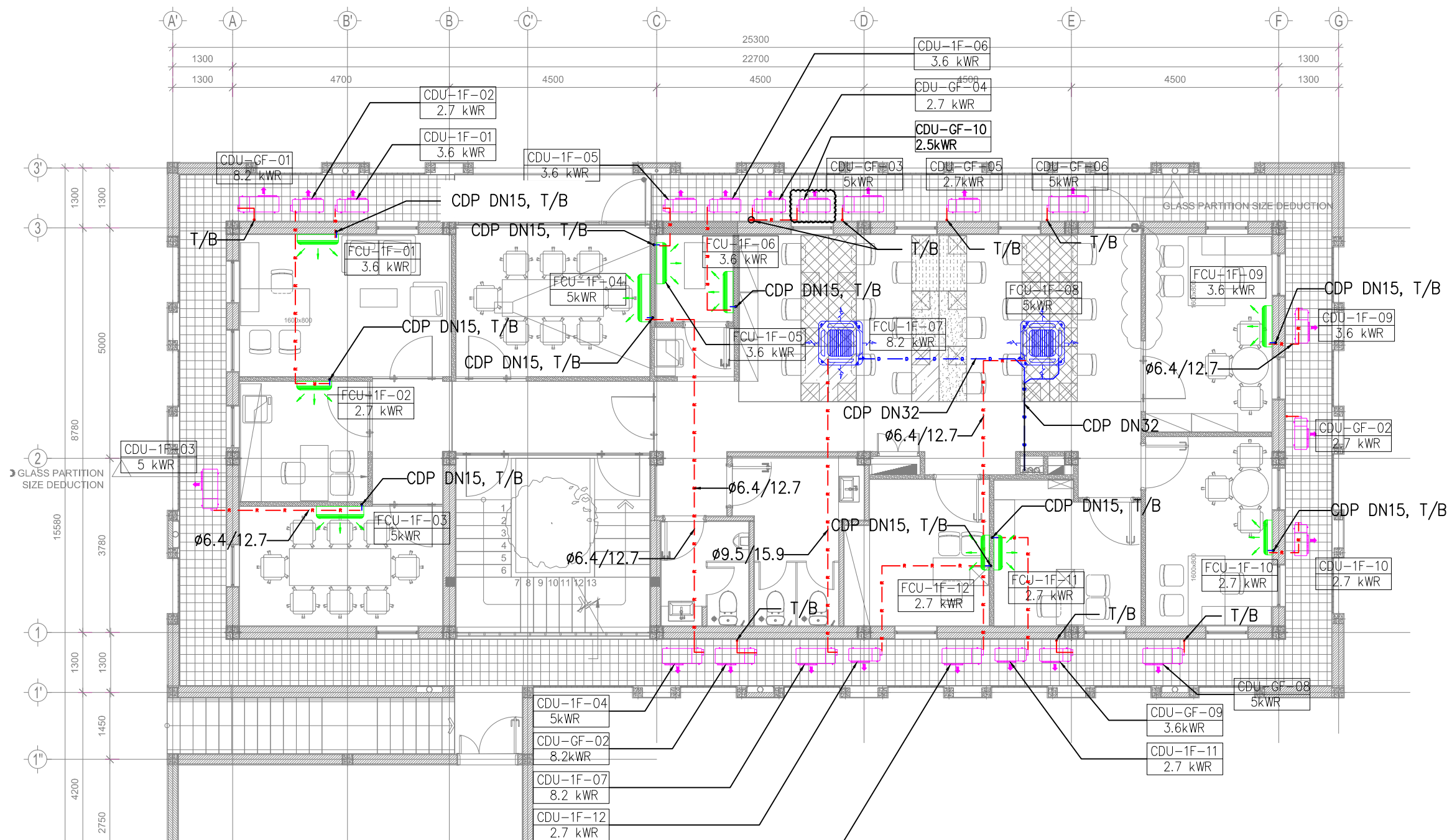
- ⊗ gate valve
= union
⊗ gate valve normally closed
↗ check valve
Ⓜ meter
Ⓜ fuel water separator
— fuel supply GI pipe from storage tank
— fuel supply GI pipe to engine
— vent pipe
— fuel filling GI pipe



GF

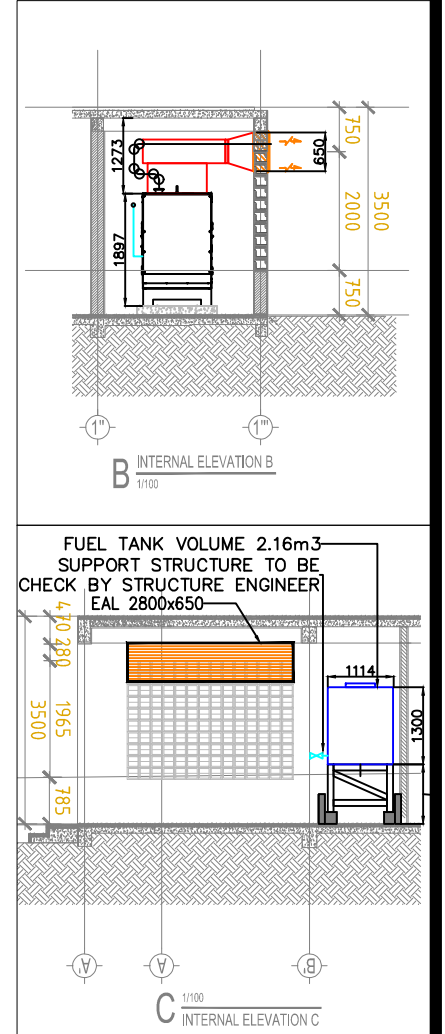
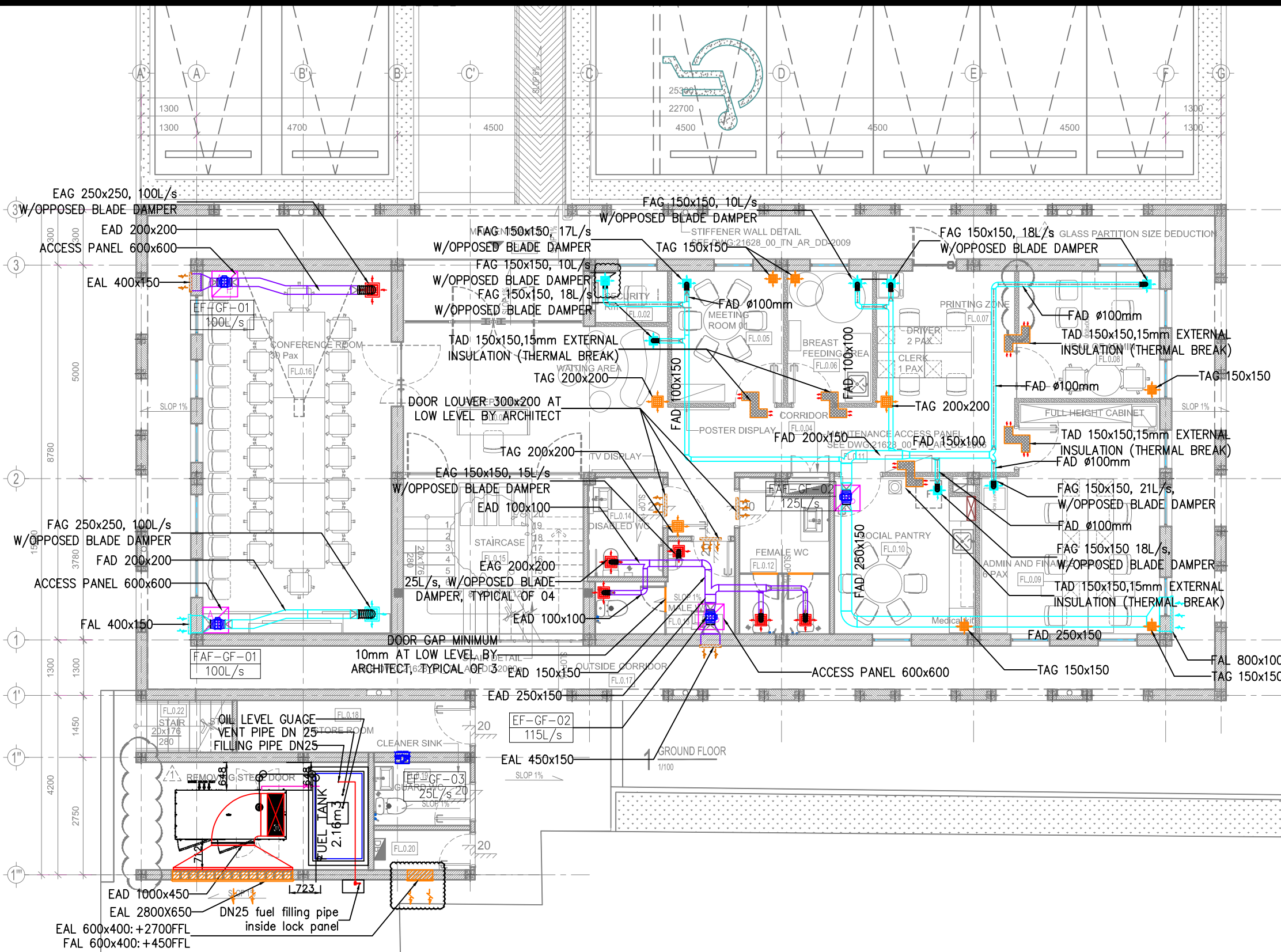
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Drawing No.:								FUEL SCHEMATIC			
21628-00-TN-AC-FS-4800 Rev.0											
Project Name:	Client:	Supported & Funded By:	Implementation:	Design:					Project No.:	SUB No.:	Stage:
Project Name Line 1	Client Name Line 1	Donor Name Line 1	UNOPS, Hub - Office	GK Engineering	0	03/04/2019	First Issue	GK	21628	00	TN
Project Name Line 2	Client Name Line 2	Donor Name Line 2	Address Line 1, Address Line 2, Address Line 3, City, Country	St.261, Sangkat Boeung Salang Phnom Penh, CAMBODIA www.gkengineering.pro	Rev.	Date	Description	Approved	AC	FS	4800
Location	Location	Donor Name Line 3			All information in this document is the property of UNOPS and can't be copied anywhere but in this project without prior written consent of UNOPS.				Drawn:	Check:	Appr.:
					GK	GK	GK	0	A3	1:100@A3	03/04/2020





1F									
PAO REPRESENTATIVE	FCU-1F-01	3.6	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	1.3
PAO'S REPRESENTATIVE SECURITY	FCU-1F-02	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9
MEETING ROOM 02	FCU-1F-03	5.0	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	1.69
MEETING ROOM 03	FCU-1F-04	5.0	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	1.69
SERVER ROOM	FCU-1F-05/06	3.6	25/18	35/27	Wall mounted	Single Split Inverter	2	1/240/50	1.3
HEAD OF OPS	FCU-1F-09	3.6	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	1.3
OPERATION UNIT SENIOR STAFF	FCU-1F-12	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9
HEAD OF PROGRAMME	FCU-1F-10	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9
PROGRAMME UNIT SENIOR STAFF	FCU-1F-11	2.7	25/18	35/27	Wall mounted	Single Split Inverter	1	1/240/50	0.9
OFFICE AREA	FCU-1F-07/08	8.2	25/18	35/27	Ceiling Cassette	Single Split Inverter	1	1/240/50	2.93
		5.0	25/18	35/27	Ceiling Cassette	Single Split Inverter	1	1/240/50	1.69

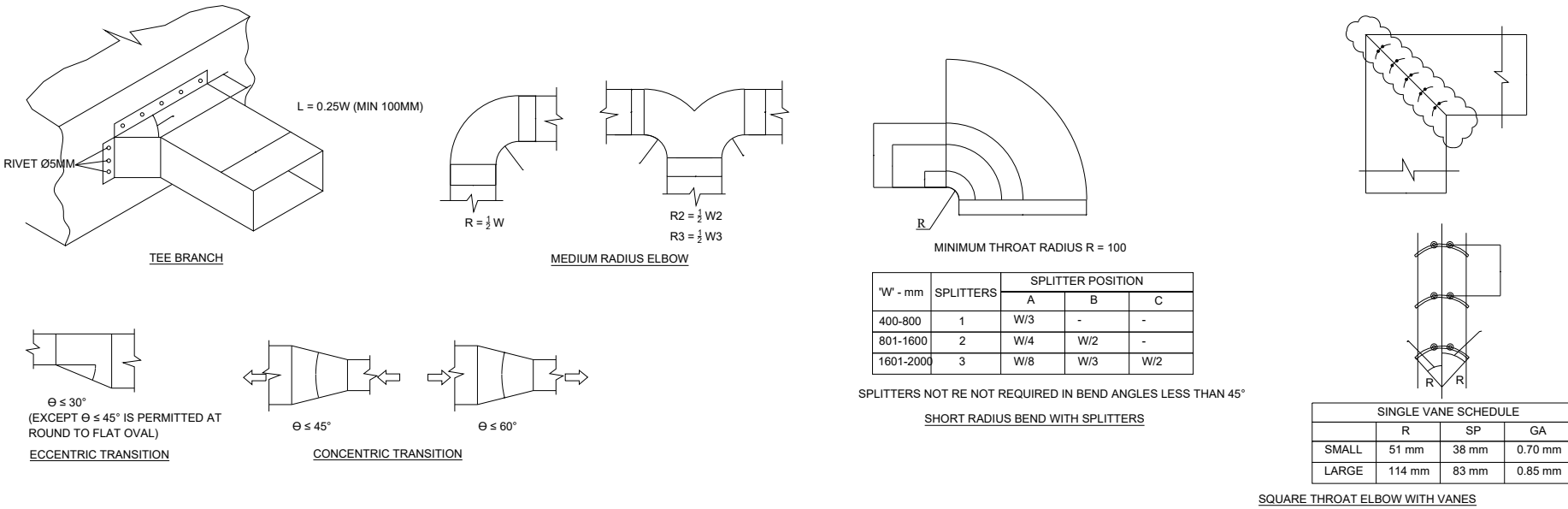
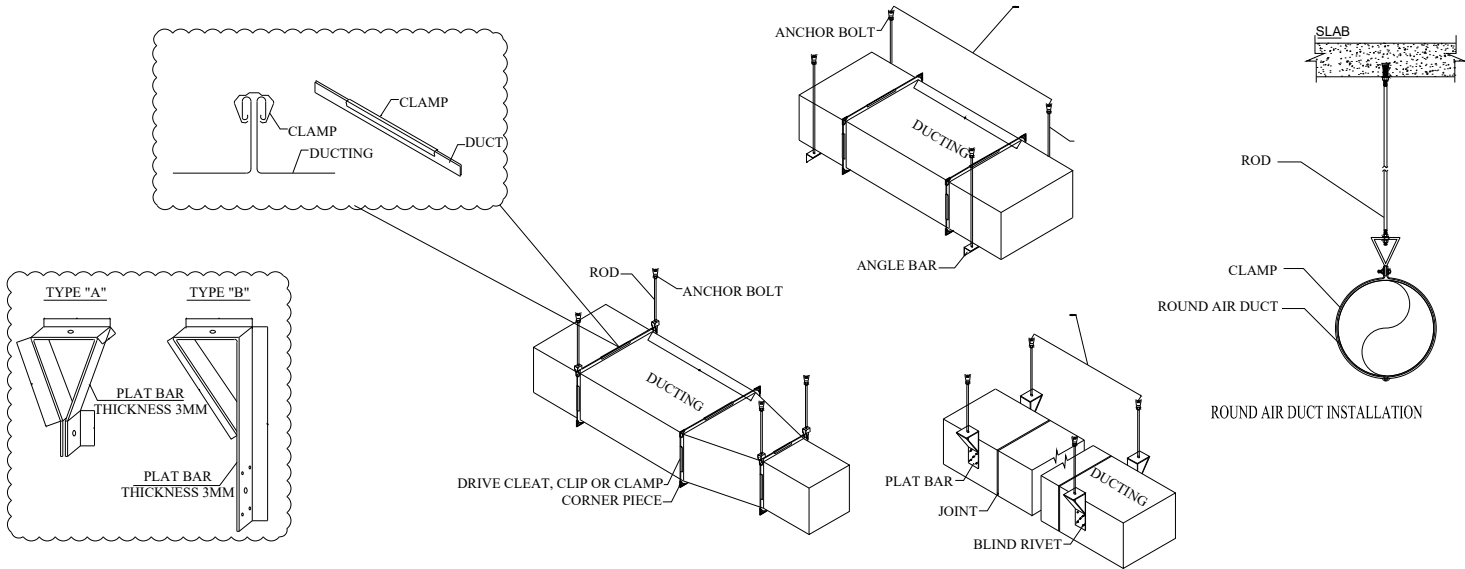
General Legend:										Drawing Notes:										Drawing Title:																																																																																				
Drawing No.:					21628-00-TN-AC-AC-4401 Rev.D					D					03/04/2019					Fifth Issue					GK																																																																															
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Project Name Line 1					Project Name Line 2					Location					Client Name Line 1					Client Name Line 2					Insert Logo Bitmap					Donor Name Line 1					Donor Name Line 2					Donor Name Line 3					UNOPS ,Hub - Office					GK Engineering					St.261, Sangkat Boeung Salang					Phnom Penh, CAMBODIA					www.gkengineering.pro					GK ENGINEERING					21628					00					TN					AC					AC					4401				
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General Legend:					Drawing Notes:					Drawing Title:					
Drawing No.:		21628-00-TN-AC-VE-4403 Rev.E			E 20/02/2020 Sixth Issue GK					MVAC GF VENTILATION LAYOUT					
D 20/02/2020 Fifth Issue GK															
C 18/02/2020 Fourth Issue GK															
B 26/10/2019 Third Issue GK															
A 04/07/2019 Second Issue GK															
Project Name:		Client:		Supported & Funded By:		Implementation:		Design:			O 20/06/2019 First Issue GK				
Project Name Line 1 Project Name Line 2 Location		Client Name Line 1 Client Name Line 2 Location		Donor Name Line 1 Donor Name Line 2 Donor Name Line 3		UNOPS, Hub - Office Address Line 1, Address Line 2, Address Line 3, City, Country		GK Engineering St.261, Sangkat Boeung Salang Phnom Penh, CAMBODIA www.gkengineering.pro			Rev. Date Description Approved				
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											Project No.: SUB No.: Stage: Discipline: Subject: Seq No.:				
											21628 00 TN AC VE 4403				
											Drawn: Check: Appr.: Rev.: Size: Scale: Issue Date:				
											GK GK GK E A3 1:100@A3 03/04/2020				

HANGER SCHEDULE		
LARGEST DUCT DIMENSION	HANGER ROD DIA.	MAX. HANGER SPACING M.
UP TO 450	10mm	2.24
475 - 750	10mm	2.24
775 - 1050	10mm	2.24
1075 - 1500	12mm	2.24

DUCTING SCHEDULE				
GREATEST DUCT DIMENSION (mm)	INTERMEDIATE REINFORCEMENT (m)	TRANSVERSE JOINT SMALLEST DIMENSION	TRANSVERSE JOINT GREATEST DIMENSION	TRANSVERSE JOINT REINFORCEMENT
100 - 350	1.200	T1 - Drive Slip	T1 - Drive Slip	(B) EAR HANG SUPPORT (PLAT BAR)
351 - 600	1.120	TDF CONNECTION (FLANGE)	TDF CONNECTION (FLANGE)	(A) EAR HANG SUPPORT (PLAT BAR)
601 - 750	1.120	TDF CONNECTION (FLANGE)	TDF CONNECTION (FLANGE)	L@25x25x2
751 - 1000	1.120	TDF CONNECTION (FLANGE)	TDF CONNECTION (FLANGE)	L@25x25x2
1001 - 1200	1.120	TDF CONNECTION (FLANGE)	TDF CONNECTION (FLANGE)	L@40x40x4
1201 - 1300	1.120	TDF CONNECTION (FLANGE)	TDF CONNECTION (FLANGE)	L@50x50x4
1301 - 2400	1.120	TDF CONNECTION (FLANGE)	TDF CONNECTION (FLANGE)	L@50x50x5



DUCT FITTING TYPICAL DETAIL

General Legend:

Drawing No.:

21628-00-TN-AC-TD-4900 Rev.0

Project Name:

Project Name Line 1
Project Name Line 2
Location

Client:

Client Name Line 1
Client Name Line 2
Location

Supported & Funded By:

Donor Name Line 1
Donor Name Line 2
Donor Name Line 3

Implementation:

UNOPS ,Hub - Office
Address Line 1,
Address Line 2,
Address Line 3,
City, Country

Design:

GK Engineering
St.261, Sangkat Boeung Salang
Phnom Penh, CAMBODIA
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Drawing Notes:

0	14/06/2019	First Issue	GK
Rev.	Date	Description	Approved

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Drawing Title:

HVAC
TYPICAL INSTALLATION DETAIL-1

Project No.:	SUB No.:	Stage:	Discipline:	Subject:	Seq No.:	
21628	00	TN	AC	TD	4900	
Drawn:	Check:	Appr.:	Rev.:	Size:	Scale:	Issue Date:
GK	GK	GK		A3	1:100@A3	14/06/2019

