Annex A

ATHLETICS STADIUM

AS-BUILT

MECHANICAL PLANS

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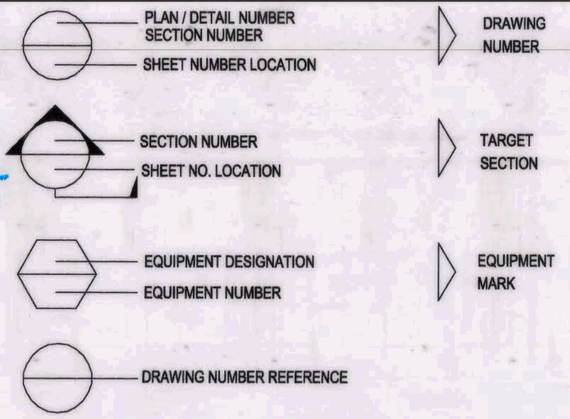
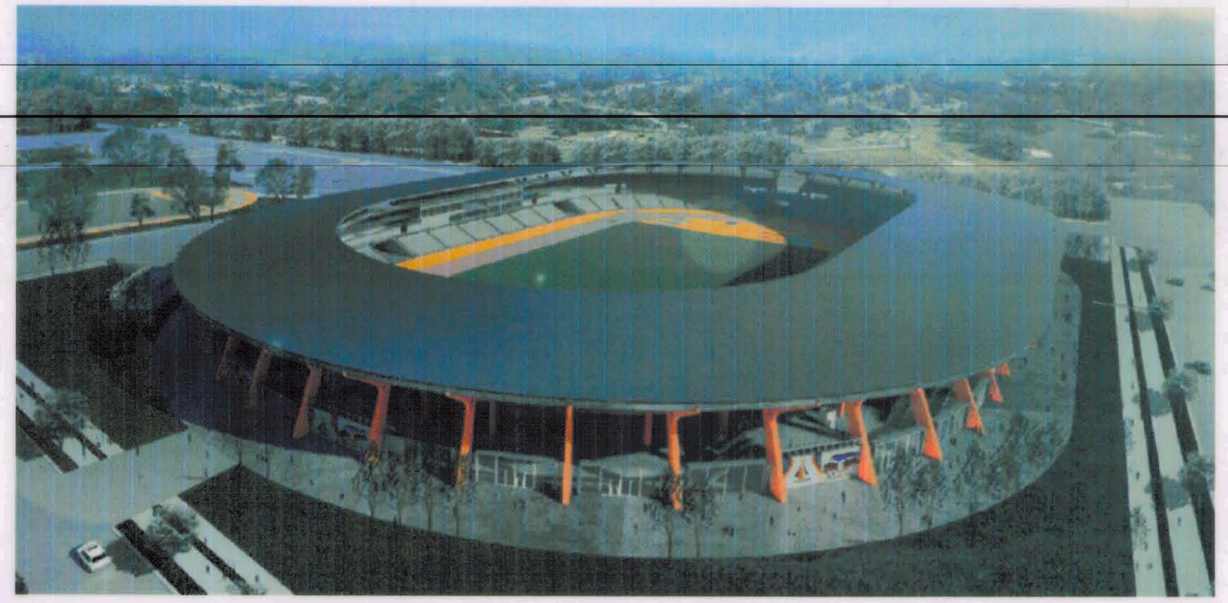
LEGEND AND SYMBOLS

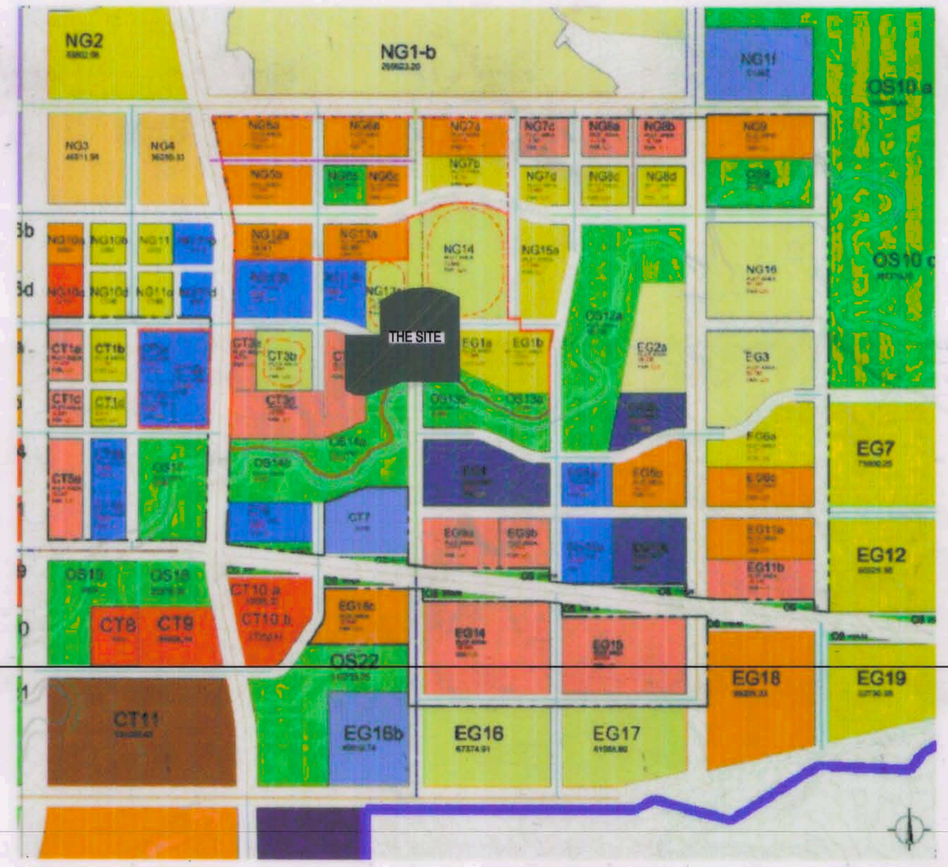


MECHANICAL ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT	KG	KILOGRAM
BTU/H	BRITISH THERMAL UNITS PER HOUR	KRH	KITCHEN RANGE HOOD
°CDB	°CELCIUS DRY BULB	KW	KILOWATT
CFM	CUBIC FEET PER MINUTE	LD	LOUVERED DOOR
CMH	CUBIC METER PER HOUR	M³/MIN	CUBIC METER PER MINUTE
dB(A)	DECIBEL	M/S	METER PER SECOND
EF	EXHAUST FAN	MM	MILLIMETER
EAD	EXHAUST AIR DUCT	RPM	REVOLUTION PER MINUTE
EAG	EXHAUST AIR GRILLE	RAG	RETURN AIR GRILLE
ERV	ENERGY RECOVERY VENTILATION	SAD	SUPPLY AIR DUCT
ESP	EXTERNAL STATIC PRESSURE	SAG	SUPPLY AIR GRILLE
FCU	FAN COIL UNIT	SQ.M	SQUARE METER
FAF	FRESH AIR FAN	TD	TRANSFER DUCT
FAD	FRESH AIR DUCT	TEF	TOILET EXHAUST FAN
FAG	FRESH AIR GRILLE	TR	TONS OF REFRIGERATION
FAI	FRESH AIR INTAKE	VD	VOLUME DAMPER
FT	FEET	V/PH/HZ	VOLT/PHASE/HERTZ
HxWxD	HEIGHT X WIDTH X DEPTH	VRV	VARIABLE REFRIGERANT VOLUME
KCAL/H	KILOCALORIE/HOUR	W	WATTS



1 M0-00 PERSPECTIVE
SCALE: NTS



2 M0-00 VICINITY MAP
SCALE: NTS

GENERAL SPECIFICATIONS:

1. THE BRAND AND MODEL OF THE LISTED EQUIPMENT ARE USED ONLY TO ESTABLISH THE DIMENSIONS AND ELECTRICAL LOAD RATINGS FOR THE PURPOSE OF LOCATION AND ELECTRICAL POWER FEED SIZING. THE EQUIPMENT SUPPLIER AND/OR CONTRACTOR ARE ENCOURAGED TO PROVIDE OTHER BRANDS AND MODEL OF HIGHER EFFICIENCY. DURING THE SITE MOBILIZATION AND EARLY START OF CONSTRUCTION, THE MECHANICAL VENTILATION AND AIR CONDITIONING (MVAC) CONTRACTOR MUST ASCERTAIN THE ACTUAL ELECTRICAL CHARACTERISTIC (V/PH/HZ) THAT WILL BE PROVIDED FOR EACH OF THE MVAC EQUIPMENT. THIS IS TO ENSURE THAT ALL EQUIPMENT TO BE PURCHASED AND SELECTED WILL MATCH WITH THE POWER PROVISIONS.
2. THE OUTDOOR UNITS SUCH AS ACCUS, EXHAUST FANS, AND OTHER DEVICE FOR AIR MOVEMENT SHOULD BE LOCATED AT AN AREA WHERE THE AIR MOVEMENT WILL NOT BE OBSTRUCTED. THE DIRECTION OF THE DISCHARGE AIR SHOULD ALLOW DISTANCE FOR THE HEAT & MOISTURE TO DISSIPATE INTO THE ENVIRONMENT WITHOUT ANY POSSIBLE RE-CIRCULATION BACK TO THE BUILDING. THIS ARRANGEMENT IS CRITICAL TO OBTAIN THE HIGHEST PERFORMANCE EFFICIENCY FOR THE INSTALLED AC SYSTEM AND SHALL BE TAKEN AS THE SOLE RESPONSIBILITY OF THE MVAC CONTRACTOR DURING THE CONSTRUCTION STAGE.
3. THE MVAC CONTRACTOR SHOULD PROVIDE PIPING FOR EACH FCU WHERE CONDENSATION IS TO BE EXPECTED DUE TO THE NATURE OF OPERATION. THE MVAC CONTRACTOR SHALL ALSO PROVIDE THE INSULATED CONDENSATE PIPE AS WELL AS THE NECESSARY CONNECTION TO THE PLUMBING LINE AT A STUB-OUT THAT MAY BE LOCATED WITHIN 5METERS OF THE FCU. THE MVAC CONTRACTOR COORDINATE THESE STUB-OUT PROVISIONS WITH THE PLUMBING CONTRACTOR AND MUST ALSO PROVIDE THE NECESSARY VENT AND CLEAN OUT FOR THE REGULAR CLEANING AND MAINTENANCE OF THE CONDENSATE PIPES WITHIN HIS SCOPE.
4. EACH FCU SHOULD BE PROVIDED WITH ITS OWN DEDICATED ROOM SPACE TEMPERATURE SENSOR AND THE CORRESPONDING CONTROLS FOR THE AUTOMATIC OPERATION AND CAPACITY MODULATION OF THE INSTALLED AC SYSTEM SERVING THAT PARTICULAR AREA. THE LOCATION OF THE ACCU AWAY FROM THE FCU MUST BE WITHIN THE DISTANCE AND HEIGHT DIFFERENTIAL SPECIFIED BY THE MANUFACTURER. THE REFRIGERANT PIPE SIZES AND INSULATION MUST COMPLY WITH THE RECOMMENDATIONS OF THE MANUFACTURER.
5. THE EXACT LOCATION OF THE FCU, AS WELL AS THE MATCHING ACCUS SHALL BE COORDINATED WITH THE CLIENT AND HIS DULY AUTHORIZED REPRESENTATIVES PRIOR TO INSTALLATION. THE LOCATION OF LOUVERS SHALL COMPLY WITH THE ARCHITECTURAL REQUIREMENTS.
6. THE MVAC CONTRACTOR SHALL SELECT, SIZE, AND PROVIDE ALL AND ANY MATERIAL, GADGET, DEVICE, OR SUPPORT NECESSARY AND SUITABLE FOR THE EQUIPMENT. THE VIBRATION ISOLATION AND SEISMIC RESTRAINTS SHALL BE CORRECTLY SELECTED AND INSTALLED FOR ALL EQUIPMENT AND SYSTEM COMPONENTS THAT MAY PRODUCE SUCH EFFECT DUE TO THEIR MOVING PARTS OR BECAUSE OF RESONANCE OR TRANSMISSION OF SUCH MECHANICAL FORCE.
7. ALL REFRIGERANT PIPING, PLUMBING, AND ELECTRICAL CONDUITS SHOULD BE PROPERLY LAID OUT AND INSTALLED WITHOUT AFFECTING THE AESTHETIC APPEARANCE OF THE BUILDING INTERIOR AND EXTERIOR. PREFERABLY, THESE ITEMS SHOULD BE CONTAINED INSIDE A PVC MOLDING WITH PAINT FINISH AS APPROVED BY THE ARCHITECT. THE SELECTION OF PAINT COLOR MUST BE APPROVED ALSO BY THE ARCHITECT.
8. THE MVAC CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF THE PIPE SLEEVES, FIRE SEALS, STEEL STRUCTURAL PLATFORMS, CONCRETE FOOTINGS AND CORRESPONDING WATER PROOFING RELATED TO HIS INSTALLATION BY THE EARLY AND EFFECTIVE COORDINATION WITH THE OTHER TRADES WHICH COVER SUCH SCOPE. ALL ACCESS PANELS AND SERVICE CLEARANCES FOR THE PREVENTIVE MAINTENANCE AS WELL AS FOR THE PERIODIC REPAIR AND PARTS REPLACEMENTS MUST ALL BE PROPERLY COORDINATED BY THE MVAC CONTRACTOR WITH THE TRADES WHICH COVER SUCH SCOPE.
9. THE MVAC CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MVAC SYSTEM REQUIREMENTS FROM OTHER TRADES AT THE SOONEST POSSIBLE TIME. SHOULD THE CLIENT DECIDE TO PURCHASE THE EQUIPMENT SEPARATELY, THE MVAC CONTRACTOR MUST REVIEW THE DELINEATION OF WORK BETWEEN THE SUPPLIER AND HIS REMAINING THE MVAC CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ANY AND ALL OTHER ITEMS NECESSARY TO COMPLETE THE INSTALLATION, TESTING, AND COMMISSIONING OF THE OWNER-SUPPLIED EQUIPMENT (EXCLUSIVE OF WARRANTY) AND ALL OTHER ITEMS WHICH WOULD NORMALLY BE PART OF HIS SCOPE IF HE SUPPLIES THE EQUIPMENT. THIS IS TO AVOID AND ELIMINATE POSSIBLE "GRAY AREA" ITEMS.
10. THE SELECTION AND SIZING OF THE SYSTEMS ARE BASED ON THE OPERATING HOURS SPECIFIED BY THE CLIENT FOR THE PROJECT. THE CHOICE OF THE INDOOR UNITS MAY DIFFER IF THE APPLICATION OR OPERATING HOURS WILL CHANGE. THE CAPACITY MATCHING WITH THE OUTDOOR UNITS MAY ALSO BE AFFECTED.
11. THE MVAC CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF PIPE SLEEVES, FIRE SEALS, AND CORRESPONDING WATER PROOFING RELATED TO HIS INSTALLATION BY THE EARLY EFFECTIVE COORDINATION WITH THE OTHER TRADES WHICH COVER SUCH SCOPE. ALL ACCESS PANELS AND SERVICE CLEARANCES FOR THE PREVENTIVE MAINTENANCE AS WELL AS FOR THE PERIODIC REPAIR AND PARTS REPLACEMENTS MUST ALL BE PROPERLY COORDINATED BY THE MVAC CONTRACTOR WITH THE TRADES WHICH COVER SUCH SCOPE.
12. DURING THE SITE MOBILIZATION AND EARLY START OF CONSTRUCTION, THE MVAC CONTRACTOR MUST ASCERTAIN THE ACTUAL ELECTRICAL CHARACTERISTICS (V/PH/HZ) THAT WILL BE PROVIDED FOR EACH OF THE MVAC EQUIPMENT. THIS IS TO ENSURE THAT ALL EQUIPMENT TO BE PURCHASED AND SELECTED WILL MATCH WITH THE POWER PROVISIONS.
13. THE INTERNATIONAL BUILDING CODE (IBC) 2009 - SECTION 403.5.4 SMOKE PROOF EXIT ENCLOSURES: "EVERY REQUIRED LEVEL EXIT STAIRWAY SERVING FLOORS MORE THAN 22.86M (75FT) ABOVE THE LOWEST LEVEL OF FIRE DEPARTMENT VEHICLE ACCESS SHALL COMPLY WITH SECTIONS 909.20 AND 1002.9 REQUIRING STAIR MECHANICAL PRESSURIZATION SYSTEM.

CLARK DEVELOPMENT CORPORATION
OFFICE OF THE BUILDING OFFICIAL

City / Municipality

LAND USE AND ZONING

LINE AND GRADE

ARCHITECTURAL

STRUCTURAL

SANITARY/PLUMBING

ELECTRICAL

MECHANICAL

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND NTD Clark, Inc. — PATRICK NICHOLAS P.DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION — ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	TABLE OF CONTENTS/LEGENDS & SYMBOLS/MECHANICAL ABBREVIATIONS/ VICINITY MAP/SITE DEVELOPMENT	M0-00

EQUIPMENT SCHEDULE

VRV SYSTEM-GF.A (GROUND FLOOR)

FAN COIL UNIT (FCU) - WALL MOUNTED TYPE						
UNIT DESIGNATION				FCU-GF.A.3	FCU-GF.A.1, & GF.A.2	FCU-GF.A.4	FCU-GF.A.5, GF.A.6, GF.A.7, GF.A.8, GF.A.9, GF.A.10 & GF.A.11
QUANTITY				1	2	1	7
POWER SUPPLY				1PH/208V-230V/60HZ			
COOLING CAPACITY		TR		0.63	1.50	1.67	1.93
		KCAL/h		1,905	4,536	5,050	5,846
		BTU/h		7,500	18,000	20,040	23,200
		KW		2.22	5.30	5.90	6.80
POWER CONSUMPTION		KW		0.017	0.032	0.032	0.032
CASING				WHITE (3.0Y8.5/0.5)			
AIRFLOW RATE (HH/H/L)		M³/MIN		7.5/4.5	12/9	15/12	19/14
		CFM		265/159	424/318	530/424	671/494
SOUND LEVEL (H/L)		dB(A)		31/25	39/33	39/33	40/35
DIMENSION (H X W X D)		MM		285X820X277	298X1060X243	298X1060X243	298X1060X243
MACHINE WEIGHT		KG		8.5	12.5	12.5	12.5
PIPING CONNECTIONS	LIQUID (FLARE)	MM		Ø 6.4	Ø 6.4	Ø 6.4	Ø 9.5
	GAS (FLARE)			Ø 12.7	Ø 12.7	Ø 12.7	Ø 15.9
	DRAIN	MM		VP13 (EXTERNAL DIA, 18/INTERNAL DIA, 13)	VP25 (EXTERNAL DIA, 32/INTERNAL DIA, 25)		
BASIS OF DESIGN				SAMSUNG			
AIR COOLED CONDENSING UNIT (ACCU)							
UNIT DESIGNATION				ACCU-GF.A			
QUANTITY				2			
POWER SOURCE				3Ph/380-415V/60Hz			
COOLING CAPACITY		TR		12.78 + 15.93			
		KW		45 + 56			
		KCAL/h		38,646 + 48,172			
		BTU/h		153,450 + 191,100			
POWER CONSUMPTION		KW		4.39(2) + 6.39(2)			
CAPACITY CONTROL		%		5-100			
CASING COLOR				IVORY WHITE (5Y7.5/1)			
COMPRESSOR	TYPE			HERMETICALLY SEALED SCROLL TYPE			
	MOTOR OUTPUT	KW		4.39(2) + 6.39(2)			
AIRFLOW RATE		M³/MIN		255 + 290			
DIMENSIONS (H X W X D)		MM		1295 x 1695 x 765 (2)			
MACHINE WEIGHT		KG		269 + 307			
SOUND LEVEL		DB(A)		62 + 65			
OPERATION RANGE		°CDB		-5 TO 49			
REFRIGERANT	TYPE			R-410A			
	CHARGE	KG		7.7			
PIPE CONNECTIONS	LIQUID	MM		Ø 12.7/15.88 (BRAZING)			
	GAS	MM		Ø 28.5 /28.58 (BRAZING)			
BRAND:				SAMSUNG			

FRESH AIR INTAKE (FAI)					
UNIT DESIGNATION				FAI-GF.A.1	FAI-GF.A.2
QUANTITY				1	1
LOCATION				GROUND FLOOR	
POWER SOURCE				1PH/208-230V/60HZ	
COOLING CAPACITY			TR	3.98	3.98
			KCAL/h	12,045	12,000
			BTU/h	47,800	47,800
			KW	14.0	14.0
POWER CONSUMPTION			KW	0.183	0.183
CASING				GALVANIZED STEEL PLATE	
FAN	AIR FLOW RATE		M³/MIN	18	18
			CFM	635	635
	ESP		Pa	219	219
AIR FILTER				SYNTHETIC FIBER UNWOVEN CLOTH FILTER (LONG LIFE)	
SOUND LEVEL			dB(A)	42	42
DIMENSIONS (HxWxD)			MM	470X744X1,100	470X744X1,100
MACHINE WEIGHT			KG	51	51
PIPE CONNECTIONS	LIQUID (FLARE)	MM		Ø9.5	Ø9.5
	GAS (BRAZING)			Ø15.9	Ø15.9
	DRAIN			PS1B FEMALE THREAD	O.D. 32
BRAND:				SAMSUNG	

VRV SYSTEM-GF.B (GROUND FLOOR)

FAN COIL UNIT (FCU) - WALL MOUNTED TYPE				
UNIT DESIGNATION				FCU-GF.B.1 TO FCU-GF.B.4
QUANTITY				4
POWER SUPPLY				1PH/208-230V/60HZ
COOLING CAPACITY			TR	1.93
			KCAL/h	5,836
			BTU/h	23,200
			KW	7.00
POWER CONSUMPTION			KW	0.032
CASING				WHITE (3.0Y8.5/0.5)
AIRFLOW RATE (HH/H/L)			M³/MIN	19/14
			CFM	671/494
SOUND LEVEL (H/L)			dB(A)	40/35
DIMENSION (H X W X D)			MM	290X1050X238
MACHINE WEIGHT			KG	14
PIPING CONNECTIONS	LIQUID (FLARE)		MM	Ø 9.5
	GAS (FLARE)			Ø 15.9
	DRAIN		MM	VP25 (EXTERNAL DIA, 32/ INTERNAL DIA, 25)
BASIS OF DESIGN				SAMSUNG
AIR COOLED CONDENSING UNIT (ACCU)				
UNIT DESIGNATION				ACCU-GF.B
QUANTITY				1
POWER SOURCE				3PH/380V/60HZ
COOLING CAPACITY			TR	12.80
			KW	45
			KCAL/h	38,706
			BTU/h	153,450
POWER CONSUMPTION			KW	4.39(2)
CAPACITY CONTROL			%	10-100
CASING COLOR				IVORY WHITE (5Y7.5/1)
COMPRESSOR	TYPE			HERMETICALLY SEALED SCROLL TYPE
	MOTOR OUTPUT		KW	4.39(2)
AIRFLOW RATE			M³/MIN	233
DIMENSIONS (H X W X D)			MM	1295 + 1695 + 765
MACHINE WEIGHT			KG	269
SOUND LEVEL			DB(A)	81
OPERATION RANGE			°CDB	-5 TO 49
REFRIGERANT	TYPE			R-410A
	CHARGE		KG	10.4
PIPE CONNECTIONS	LIQUID		MM	Ø 12.7 (BRAZING)
	GAS		MM	Ø 28.6 (BRAZING)
BRAND:				SAMSUNG

FRESH AIR INTAKE (FAI)				
UNIT DESIGNATION				FAI-GF.B
QUANTITY				1
LOCATION				GROUND FLOOR
POWER SOURCE				1PH/208-230V/60HZ
COOLING CAPACITY			TR	3.98
			KCAL/h	12,000
			BTU/h	47,800
			KW	14.00
POWER CONSUMPTION			KW	0.183
CASING				GALVANIZED STEEL PLATE
FAN	AIR FLOW RATE		M³/MIN	18
			CFM	635
	ESP		Pa	219
AIR FILTER				SYNTHETIC FIBER UNWOVEN CLOTH FILTER (LONG LIFE)
SOUND LEVEL			dB(A)	42
DIMENSIONS (HxWxD)			MM	470X744X1,100
MACHINE WEIGHT			KG	51
PIPE CONNECTIONS	LIQUID (FLARE)	MM		Ø9.5
	GAS (BRAZING)			Ø15.9
	DRAIN			O.D. 32
BRAND:				SAMSUNG

SPLIT TYPE SYSTEM (GROUND FLOOR)

SPLIT TYPE FLOOR MOUNTED				
UNIT DESIGNATION	INDOOR UNIT			FCU-GF.1 TO FCU-GF.6
	OUTDOOR UNIT			ACCU-GF.1 TO ACCU-GF.6
QUANTITY				6
POWER SOURCE				1PH, 230-240V, 60HZ
COOLING CAPACITY RATED			TR	4.05
			KW	14.26
			BTU/h	48,614
POWER CONSUMPTION			W	5,890
COP			W/W	2.38
CSPF			Wh/Wh	4.1
INDOOR UNIT	COLOUR			FRESH WHITE
	AIR FLOW RATE (H)		M³/MIN	30/28/26
			CFM	1059/988/918
	SOUND PRESSURE LEVEL (H/L/SL)		DB(A)	53/51/48
	DIMENSIONS (HXWXD)		MM	1850X600X350
	MACHINE WEIGHT		KG	47
	CERTIFIED OPERATION RANGE		°CWB	14 TO 25
OUTDOOR UNIT	COLOUR			IVORY WHITE
	COIL		TYPE	MICRO CHANNEL
	COMPRESSOR	TYPE		HERMETICALLY SEALED SWING TYPE
		MOTOR OUTPUT	KW	4.19
	REFRIGERANT CHARGE (R410A)		KG	1.9 (CHARGED FOR 30M)
	SOUND PRESSURE LEVEL	H/SL	DB(A)	51
	~~DIMENSIONS (HXWXD)~~		MM	~~940 X 1210 X 320~~
	MACHINE WEIGHT		KG	65
	OPERATION RANGE		°CDB	21 TO 46
PIPING CONNECTIONS	LIQUID (FLARE)		MM	Ø 9.5
	GAS (FLARE		MM	Ø 15.9
	DRAIN	INDOOR UNIT	MM	VP 20 (O.DØ26 X IDØ20)
		OUTDOOR UNIT		Ø26.0 (HOLE)
MAX. INTERUNIT PIPING LENGTH			M	50 (EQUIVALENT LENGTH 70M)
MAX. INSULATION LEVEL DIFFERENCE			M	30
BRAND:				SAMSUNG

VRV SYSTEM-GF.C (GROUND FLOOR)

FAN COIL UNIT (FCU) - CEILING MOUNTED CASSETTE (2 WAY FLOW)				
UNIT DESIGNATION				FCU-GF.C.1 TO GF.C.5
QUANTITY				5
POWER SUPPLY				1PH/208-230V/ 60HZ
COOLING CAPACITY			TR	1.50
			KCAL/h	4,536
			BTU/h	18,000
			KW	5.28
POWER CONSUMPTION			KW	0.014 (2)
CASING				GALVANIZED STEEL PLATE
AIRFLOW RATE (HH/H/L)			M³/MIN	9/6.5
			CFM	318/230
SOUND LEVEL (H/L)			dB(A)	34/28
DIMENSION (H X W X D)			MM	230 X 890 x 575
MACHINE WEIGHT			KG	21
PIPING CONNECTIONS	LIQUID (FLARE)		MM	Ø 6.4
	GAS (FLARE)			Ø 12.7
	DRAIN		MM	VP25 (EXTERNAL DIA, 32/INTERNAL DIA, 25)
BRAND:				SAMSUNG

AIR COOLED CONDENSING UNIT (ACCU)				
UNIT DESIGNATION				ACCU-GF.C
QUANTITY				1
POWER SOURCE				3PH/380-415/60HZ
COOLING CAPACITY			TR	7.95
			KW	28.00
			KCAL/h	24,040
			BTU/h	95,480
POWER CONSUMPTION			KW	6.39
CAPACITY CONTROL			%	20-100
CASING COLOR				IVORY WHITE (5Y7.5/1)
COMPRESSOR	TYPE			HERMETICALLY SEALED SCROLL TYPE
	MOTOR OUTPUT		KW	6.39
AIRFLOW RATE			M³/MIN	157
DIMENSIONS (H X W X D)			MM	1,695 x 880 x 765
MACHINE WEIGHT			KG	197
SOUND LEVEL			DB(A)	58
OPERATION RANGE			°CDB	-5 TO 43
REFRIGERANT	TYPE			R-410A
	CHARGE		KG	5.5
PIPE CONNECTIONS	LIQUID		MM	Ø 9.5 (BRAZING)
	GAS		MM	Ø 22.22 (BRAZING)
BRAND:				SAMSUNG

VRV SYSTEM-GF.D (GROUND FLOOR)

FAN COIL UNIT (FCU) - CEILING MOUNTED CASSETTE (2 WAY FLOW)				
UNIT DESIGNATION				FCU-GF.D.1 TO GF.D.5
QUANTITY				5
POWER SUPPLY				1PH/208-230V/ 60HZ
COOLING CAPACITY			TR	1.50
			KCAL/h	4,536
			BTU/h	18,000
			KW	5.28
POWER CONSUMPTION			KW	0.014 (2)
CASING				GALVANIZED STEEL PLATE
AIRFLOW RATE (HH/H/L)			M³/MIN	9/6.5
			CFM	318/230
SOUND LEVEL (H/L)			dB(A)	34/28
DIMENSION (H X W X D)			MM	230 x 890 x 575
MACHINE WEIGHT			KG	21
PIPING CONNECTIONS	LIQUID (FLARE)		MM	Ø 6.4
	GAS (FLARE)			Ø 12.7
	DRAIN		MM	VP25 (EXTERNAL DIA, 32/INTERNAL DIA, 25)
BRAND:				SAMSUNG

AIR COOLED CONDENSING UNIT (ACCU)				
UNIT DESIGNATION				ACCU-GF.D
QUANTITY				1
POWER SOURCE				3PH/380-415V/60HZ
COOLING CAPACITY			TR	7.95
			KW	28.00
			KCAL/h	24,040
			BTU/h	95,480
POWER CONSUMPTION			KW	6.39
CAPACITY CONTROL			%	20-100
CASING COLOR				IVORY WHITE (5Y7.5/1)
COMPRESSOR	TYPE			HERMETICALLY SEALED SCROLL TYPE
	MOTOR OUTPUT		KW	6.39
AIRFLOW RATE			M³/MIN	157
DIMENSIONS (H X W X D)			MM	1,657 x 880 x 765)
MACHINE WEIGHT			KG	197
SOUND LEVEL			DB(A)	58
OPERATION RANGE			°CDB	-5 TO 43
REFRIGERANT	TYPE			R-410A
	CHARGE		KG	5.5
PIPE CONNECTIONS	LIQUID		MM	Ø 9.5 (BRAZING)
	GAS		MM	Ø 22.22 (BRAZING)
BRAND:				SAMSUNG

SPLIT TYPE SYSTEM-MDF,TELCO&FCC ROOM(GROUND FLOOR)

SPLIT TYPE WALL MOUNTED					
UNIT DESIGNATION	INDOOR UNIT			FCU-MDF.1, FCU-MDF.2, FCU-TEL.2	FCU-TEL.1 & FCU-FCC.1 & FCU-FCC.2
	OUTDOOR UNIT			ACCU-MDF.1, ACCU-MDF.2, ACCU-TEL.1 & ACCU-TEL.2	ACCU-FCC.1 & ACCU-FCC.2
QUANTITY				4	2
POWER SOURCE				1PH, 220-240V, 60HZ	1PH, 220-240V, 60HZ
COOLING CAPACITY RATED			TR	1.0	2.0
			KW	3.5	7.04
			BTUH	12,000	24,000
POWER CONSUMPTION			W	910	1,820
COP			W/W	3.85	3.55
INDOOR UNIT	COLOUR			PURE WHITE	PURE WHITE
	AIR FLOW RATE (H)		M³/MIN	8.0	18.2
			CFM	282	643
	SOUND PRESSURE LEVEL (H/L/SL)		DB(A)	38 / 26 / 23	46/ 37 / 33
	DIMENSIONS (HXWXD)		MM	283X800X195	340 X 1,050 X 248
	MACHINE WEIGHT		KG	9	14
OUTDOOR UNIT	COLOUR			IVORY WHITE	IVORY WHITE
	COMPRESSOR	TYPE		HERMETICALLY SEALED SWING TYPE	HERMETICALLY SEALED SWING TYPE
		MOTOR OUTPUT	W	800	2,400
	REFRIGERANT CHARGE		TYPE	R-32	R-32
			CHARGE	1.9 (CHARGED FOR 30M)	1.9 (CHARGED FOR 30M)
	SOUND PRESSURE LEVEL	H/SL	DB(A)	47 / 44	52 / 49
	DIMENSIONS (HXWXD)		MM	550X765X285	770 X 900 X 320
	MACHINE WEIGHT		KG	34	60
	OPERATION RANGE		°CDB	19.4 TO 46	19.4 TO 46
PIPING CONNECTIONS	LIQUID		MM	Ø 6.4	Ø 6.4
	GAS		MM	Ø 9.5	Ø 15.9
	DRAIN		MM	Ø 18	Ø 18
MAX. PIPING LENGTH			M	20	30
MAX. LEVEL DIFFERENCE			M	15	20
BRAND:				SAMSUNG	

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc.	HILMARC'S CONSTRUCTION CORPORATION	FILIPINAS DRAVO CORPORATION	BANDAR HEBAT BUILDERS, INC.	TCGI ENGINEERS	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	EQUIPMENT SCHEDULE	M1-01
VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P.DAVID, PRESIDENT	ANGELITO L. OLLERES, PROJECT MANAGER	ALFREDO R. REVILLA, PROJECT MANAGER	ISAAC S. DAVID, PRESIDENT	VIRGILIO A. MADRAZO, PRESIDENT/CEO			

EQUIPMENT SCHEDULE

VRV SYSTEM-2F.A (2F FLOOR)

FAN COIL UNIT (FCU) - WALL MOUNTED TYPE

UNIT DESIGNATION			FCU-2F.A.1 & 2F.A.2	FCU-2F.A.5 TO 2F.A.9	FCU-2F.A.3 & 2F.A.4
QUANTITY			2	5	2
POWER SUPPLY			1PH/208V-230/60HZ		
COOLING CAPACITY		TR	1.50	1.67	1.93
		KCAL	4,536	5,050	5,836
		BTU/H	18,000	20,000	23,200
		KW	5.28	5.90	6.80
POWER CONSUMPTION		KW	0.032	0.032	0.032
CASING			WHITE (3.0Y8.5/0.5)		
AIRFLOW RATE (HH/H/L)		M³/MIN	12/9	15/12	19/14
		CFM	424/318	530/424	671/494
SOUND LEVEL (H/L)		dB(A)	39/33	42/37	47/41
DIMENSION (HxWxD)		MM	298X1065X243	298X1065X243	298X1060X243
MACHINE WEIGHT		KG	12.5	12.5	12.5
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø 6.4	Ø 6.4	Ø 9.5
	GAS (FLARE)		Ø 12.7	Ø 12.7	Ø 15.9
	DRAIN	MM	VP25 (EXTERNAL DIA, 32/INTERNAL DIA, 25)		
BRAND:			SAMSUNG		

AIR COOLED CONDENSING UNIT (ACCU)

UNIT DESIGNATION			ACCU-2F.A
~~QUANTITY~~			~~2~~
POWER SOURCE			3Ph/380-415V/60Hz
COOLING CAPACITY	TR		12.79 + 15.93
	KW		45 + 56
	KCAL/h		38,676 + 48,172
	BTU/h		153,450 + 191,100
POWER CONSUMPTION	KW		4.39 (2) + 6.39 (2)
CAPACITY CONTROL	%		5-100
CASING COLOR			IVORY WHITE (5Y7.5/1)
COMPRESSOR	TYPE		HERMETICALLY SEALED SCROLL TYPE
	MOTOR OUTPUT	KW	4.39 (2) + 6.39 (2)
AIRFLOW RATE		M³/MIN	255 + 290
DIMENSIONS (H x W x D)		MM	(1295 x 1695 x 765) (2)
MACHINE WEIGHT		KG	269 + 307
SOUND LEVEL		DB(A)	63/65
OPERATION RANGE		°CDB	-5 TO 49
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	7.7 + 8.4
PIPING CONNECTIONS	LIQUID	MM	Ø 12.7/15.88 (BRAZING)
	GAS	MM	Ø 28.58/28.58 (BRAZING)
BRAND:			SAMSUNG

FAN COIL UNIT (FCU) - CEILING MOUNTED CASSETTE (2 WAY FLOW)

UNIT DESIGNATION				FCU-2F.A.10 TO FCU-2F.A.12
QUANTITY				3
POWER SUPPLY				1PH/208-230V/60HZ
COOLING CAPACITY		TR		1.50
		KCAL		4,536
		BTU/H		18,000
		KW		5.28
POWER CONSUMPTION		KW		0.014 (2)
CASING				GALVANIZED STEEL PLATE
AIRFLOW RATE (HH/H/L)		M³/MIN		9/6.5
		CFM		318/230
SOUND LEVEL (H/L)		dB(A)		34/28
DIMENSION (HxWxD)		MM		890X230X575
MACHINE WEIGHT		KG		21
PIPING CONNECTIONS	LIQUID (FLARE)	MM		Ø 6.4
	GAS (FLARE)			Ø 12.7
	DRAIN	MM		VP25 (EXTERNAL DIA, 32/INTERNAL DIA, 25)
BRAND:				SAMSUNG

FRESH AIR INTAKE (FAI)

UNIT DESIGNATION			FAI-2F.A
QUANTITY			1
LOCATION			2ND FLOOR
POWER SOURCE			1PH/230V/60HZ
COOLING CAPACITY		TR	7.96
		KCAL/h	24,070
		BTU/h	95,500
		KW	28.02
POWER CONSUMPTION		KW	0.40
CASING			GALVANIZED STEEL PLATE
FAN	AIR FLOW RATE	M³/MIN	35
		CFM	1,236
	ESP	Pa	257
AIR FILTER			SYNTHETIC FIBER UNWOVEN CLOTH FILTER (LONG LIFE)
SOUND LEVEL		dB(A)	47
DIMENSIONS (HxWxD)		MM	470X1240X1040
MACHINE WEIGHT		KG	123
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø9.5
	GAS (BRAZING)		Ø22.2
	DRAIN		PS1B FEMALE THREAD
BRAND:			SAMSUNG

ENERGY RECOVERY VENTILATOR (ERV)

UNIT DESIGNATION				ERV-2F.A
QUANTITY				1
LOCATION				2ND FLOOR
TR				1.45
REFRIGERANT				R-401A
POWER SUPPLY				1PH/220-240V/50HZ
AIR FILTER RATE & STATIC PRESSURE	ULTRA-HIGH	AIRFLOW RATE	M³/H	500
		STATIC PRESSURE	Pa	180
	ULTRA-HIGH	AIRFLOW RATE	M³/H	500
		STATIC PRESSURE	Pa	150
	LOW	AIRFLOW RATE	M³/H	440
		STATIC PRESSURE	Pa	110
POWER CONSUMPTION	HEAT EXCHANGER MODE	ULTRA-HIGH	W	560
		HIGH		490
		LOW		420
	BYPASS MODE	ULTRA-HIGH	W	560
		HIGH		490
		LOW		420
FAN TYPE				SIROCCO FAN
MOTOR OUTPUT			KW	0.280 x 2
SOUND LEVEL (220/230/240V)	HEAT EXCHANGER MODE	ULTRA-HIGH	dB(A)	38/38.5/39
		HIGH		36/36.5/37
		LOW		33.5/34.5/35.5
	BYPASS MODE	ULTRA-HIGH	dB(A)	38/38.5/39
		HIGH		36/36.5/37
		LOW		33.5/34.5/35.5
TEMP. EXCHANGE EFFICIENCY	ULTRA-HIGH		%	76
	HIGH			76
	LOW			77.5
ENTHALPY EXCHANGE EFFICIENCY (COOLING)	ULTRA-HIGH		%	64
	HIGH			64
	LOW			67
CASING				GALVANIZED STEEL PLATE
INSULATING MATERIAL				SELF-EXTINGUISHABLE URETHANE FOAM
HEAT EXCHANGER SYSTEM				AIR TO AIR CROSS FLOW TOTAL HEAT (SENSIBLE + LATENT HEAT) EXCHANGER)
HEAT EXCHANGER ELEMENT				SPECIALLY PROCESSED NONFLAMMABLE PAPER
AIR FILTER				MULTI-DIRECTIONAL FIBROUS FLEECE
DIMENSIONS	HEIGHT		MM	387
	WIDTH			1,764
	DEPTH			1,214
CONNECTION DUCT DIAMETER			MM	Ø200
MACHINE WEIGHT	NET		KG	96
UNIT AMBIENT CONDITION	AROUND UNIT			0°C-40°C DB, 80%RH OR LESS
	OA (NOTE 9)			-15°C-40°C DB, 80%RH OR LESS
	RA (NOTE 9)			0°C-40°C DB, 80%RH OR LESS
CONNECTABLE OUTDOOR UNITS				RX(Y)Q5-54PAY1, RX(Y)Q16-50PAHY1
BRAND:				SAMSUNG

VRV SYSTEM-2F.B (2F FLOOR)

FAN COIL UNIT (FCU) - CEILING MOUNTED CASSETTE (2 WAY FLOW)

UNIT DESIGNATION			FCU-2F.B.1 TO 2F.B.3
QUANTITY			3
POWER SUPPLY			1PH/208V-230/ 60HZ
COOLING CAPACITY	TR		1.50
	KCAL		4,536
	BTU/H		18,000
	KW		5.28
POWER CONSUMPTION	KW		0.014 (2)
CASING			GALVANIZED STEEL PLATE
AIRFLOW RATE (HH/H/L)		M³/MIN	9/6.5
		CFM	318/230
SOUND LEVEL (H/L)		dB(A)	38/35
DIMENSION (H X W X D)		MM	890X230X575
MACHINE WEIGHT		KG	21
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø 6.4
	GAS (FLARE)		Ø 12.7
	DRAIN	MM	VP25 (EXTERNAL DIA, 32/ INTERNAL DIA, 25)
BRAND:			SAMSUNG

AIR COOLED CONDENSING UNIT (ACCU)

UNIT DESIGNATION			ACCU-2F.B
QUANTITY			2
POWER SOURCE			3Ph/380-415V/60Hz
COOLING CAPACITY	TR		12.79 + 15.93
	KW		45 + 56
	KCAL/H		38,676 + 48,172
	BTUH		153,450 + 191,100
POWER CONSUMPTION	KW		4.39 (2) + 6.39 (2)
CAPACITY CONTROL	%		5-100
CASING COLOR			IVORY WHITE (5Y7.5/1)
COMPRESSOR	TYPE		HERMETICALLY SEALED SCROLL TYPE
	MOTOR OUTPUT	KW	4.39 (2) + 6.39 (2)
AIRFLOW RATE		M³/MIN	255 + 290
DIMENSIONS (H X W X D)		MM	(1295 x 1695 x 765) (2)
MACHINE WEIGHT		KG	269 + 307
SOUND LEVEL		DB(A)	63/67
OPERATION RANGE		°CDB	-5 TO 49
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	7.7 + 8.4
PIPING CONNECTIONS	LIQUID	MM	Ø 12.7 / 15.88 (BRAZING)
	GAS	MM	Ø 28.58 / 28.58 (BRAZING)
BRAND:			SAMSUNG

FAN COIL UNIT (FCU) - WALL MOUNTED TYPE

UNIT DESIGNATION			FCU-2F.B.4	FCU-2F.B.5
QUANTITY			1	1
POWER SUPPLY			1PH/208-230V/60HZ	
COOLING CAPACITY	TR		1.67	1.93
	KCAL		5,050	5836
	BTU/H		20,000	23200
	KW		5.90	7.00
POWER CONSUMPTION	KW		0.032	0.032
CASING			WHITE (3.0Y8.5/0.5)	
AIRFLOW RATE (HH/H/L)		M³/MIN	15/12	19/14
		CFM	530/424	671/494
SOUND LEVEL (H/L)		dB(A)	39/33	47/41
DIMENSION (H X W X D)		MM	298X1065X243	298X1065X243
MACHINE WEIGHT		KG	12.50	12.50
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø 6.4	Ø 9.5
	GAS (FLARE)		Ø 12.7	Ø 15.9
	DRAIN	MM	VP25 (EXTERNAL DIA, 32/ 25)	INTERNAL DIA
BRAND:			SAMSUNG	

FAN COIL UNIT (FCU) - CEILING MOUNTED CASSETTE (ROUND FLOW)

UNIT DESIGNATION			FCU-2F.B.6 TO 2F.B.13
QUANTITY			8
POWER SUPPLY			1PH/220V-240/60HZ
COOLING CAPACITY		TR	2.00
		KCAL	6,048
		BTU/H	24,000
		KW	7.00
POWER CONSUMPTION		KW	0.065
CASING			GALVANIZED STEEL PLATE
AIRFLOW RATE (HH/H/L)		M³/MIN	16/13.5
		CFM	565/388
SOUND LEVEL (H/L)		dB(A)	38/32
DIMENSION (H X W X D)		MM	1000 x 66 x 1000
MACHINE WEIGHT		KG	21.00
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø 9.52
	GAS (FLARE)		Ø 15.9
	DRAIN	MM	VP25 (EXTERNAL DIA, 32/INTERNAL DIA, 25)
BRAND:			SAMSUNG

ENERGY RECOVERY VENTILATOR (ERV)

UNIT DESIGNATION				ERV-2F.B.1	ERV-2F.B.2
QUANTITY				1	1
LOCATION				2ND FLOOR	2ND FLOOR
TR				1.45	2.98
REFRIGERANT				R-401A	R-401A
POWER SUPPLY				1PH/220-240V/50HZ	1PH/220-240V/50HZ
AIR FILTER RATE & STATIC PRESSURE (NOTE 7)	ULTRA-HIGH	AIRFLOW RATE	M³/H	500	1000
		STATIC PRESSURE	Pa	180	150
	ULTRA-HIGH	AIRFLOW RATE	M³/H	500	950
		STATIC PRESSURE	Pa	150	100
	LOW	AIRFLOW RATE	M³/H	440	820
		STATIC PRESSURE	Pa	110	70
POWER CONSUMPTION	HEAT EXCHANGER MODE	ULTRA-HIGH	W	560	670
		HIGH		490	570
		LOW		420	480
	BYPASS MODE	ULTRA-HIGH	W	560	670
		HIGH		490	570
		LOW		420	480
FAN TYPE				SIROCCO FAN	SIROCCO FAN
MOTOR OUTPUT			KW	0.280 x 2	0.280 x 2
SOUND LEVEL (NOTE 5) (220/230/240V)	HEAT EXCHANGER MODE	ULTRA-HIGH	dB(A)	38/38.5/39	40/40.5/41
		HIGH		36/36.5/37	38/38.5/39
		LOW		33.5/34.5/35.5	35/36/36.5
	BYPASS MODE	ULTRA-HIGH	dB(A)	38/38.5/39	40/40.5/41
		HIGH		36/36.5/37	38/38.5/39
		LOW		33.5/34.5/35.5	35/36/36.5
TEMP. EXCHANGE EFFICIENCY	ULTRA-HIGH		%	76	74
	HIGH			76	74
	LOW			77.5	76.5
ENTHALPY EXCHANGE EFFICIENCY (COOLING)	ULTRA-HIGH		%	64	62
	HIGH			64	62
	LOW			67	66
CASING				GALVANIZED STEEL PLATE	
INSULATING MATERIAL				SELF-EXTINGUISHABLE URETHANE FOAM	
HEAT EXCHANGER SYSTEM				AIR TO AIR CROSS FLOW TOTAL HEAT (SENSIBLE + LATENT HEAT) EXCHANGER)	
HEAT EXCHANGER ELEMENT				SPECIALLY PROCESSED NONFLAMMABLE PAPER	
AIR FILTER				MULTI-DIRECTIONAL FIBROUS FLEECE	
DIMENSIONS	HEIGHT		MM	387	387
	WIDTH			1,764	1,764
	DEPTH			1,214	1,214
CONNECTION DUCT DIAMETER			MM	Ø200	Ø250
MACHINE WEIGHT	NET		KG	96	114
UNIT AMBIENT CONDITION	AROUND UNIT			0°C-40°C DB, 80%RH OR LESS	0°C-40°C DB, 80%RH OR LESS
	OA (NOTE 9)			-15°C-40°C DB, 80%RH OR LESS	-15°C-40°C DB, 80%RH OR LESS
	RA (NOTE 9)			0°C-40°C DB, 80%RH OR LESS	0°C-40°C DB, 80%RH OR LESS
CONNECTABLE OUTDOOR UNITS				RX(Y)Q5-54PAY1, RX(Y)Q16-50PAHY1	RX(Y)Q5-54PAY1, RX(Y)Q16-50PAHY1
BRAND:				SAMSUNG	

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc.	HILMARC'S CONSTRUCTION CORPORATION	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants	BANDAR HEBAT BUILDERS, INC.	TCGI ENGINEERS	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	EQUIPMENT SCHEDULE	M1-02
VIVENCIO B. DIZON PRESIDENT / PATRICK NICHOLAS P.DAVID PRESIDENT	ANGELITO L. OLLERES PROJECT MANAGER	ALFREDO R. REVILLA PROJECT MANAGER	ISAAC S. DAVID PRESIDENT	VIRGILIO A. MADRAZO PRESIDENT/CEO			

EQUIPMENT SCHEDULE

VRV SYSTEM-3F.A (3F FLOOR)

FAN COIL UNIT (FCU) - WALL MOUNTED TYPE					
UNIT DESIGNATION			FCU-3F.A.3, 3F.A.4, 3F.A.6 & 3F.A.7	FCU-3F.A.2 & 3F.A.5	FCU-3F.A.1
QUANTITY			4	2	1
POWER SUPPLY			1PH/208V-230/60HZ		
COOLING CAPACITY		TR	1.00	1.50	1.67
		KCAL/h	3,024	4,536	5,050
		BTU/h	12,000	18,000	20,000
		KW	3.52	5.30	5.90
POWER CONSUMPTION		KW	0.017	0.032	0.032
CASING			WHITE (3.0Y8.5/0.5)		
AIRFLOW RATE (HH/H/L)		M³/MIN	8.5/5.5	12/9	15/12
		CFM	300/194	424/318	530/424
SOUND LEVEL (H/L)		dB(A)	36/29	39/33	42/37
DIMENSION (H X W X D)		MM	285X820X227	298X1065X243	298X1065X243
MACHINE WEIGHT		KG	9.0	12.5	12.5
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø 6.4	Ø 6.4	Ø 6.4
	GAS (FLARE)		Ø 12.7	Ø 12.7	Ø 12.7
	DRAIN	MM	VP25 (EXTERNAL DIA, 32/INTERNAL DIA, 25)		
BRAND:			SAMSUNG		

FAN COIL UNIT (FCU) - CEILING MOUNTED CASSETTE (ROUND FLOW)			
UNIT DESIGNATION			FCU-3F.A.8
QUANTITY			1
POWER SUPPLY			1PH/208V-230/60HZ
COOLING CAPACITY		TR	1.50
		KCAL/h	4,536
		BTU/h	18,000
		KW	5.28
POWER CONSUMPTION		KW	0.065
CASING			GALVANIZED STEEL PLATE
AIRFLOW RATE (HH/H/L)		M³/MIN	16/13.5/11
		CFM	565/477/388
SOUND LEVEL (H/L)		dB(A)	33/29
DIMENSION (H X W X D)		MM	1000X66X1000
MACHINE WEIGHT		KG	21
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø 6.4
	GAS (FLARE)		Ø 12.7
	DRAIN	MM	VP25 (EXTERNAL DIA, 32/INTERNAL DIA, 25)
BRAND:			SAMSUNG

FRESH AIR INTAKE (FAI)			
UNIT DESIGNATION			FAI-3F.A.1 & 3F.A.2
QUANTITY			2
LOCATION			3RD FLOOR
POWER SOURCE			1PH/208-230V/60HZ
COOLING CAPACITY		TR	3.98
		KCAL/h	12,045
		BTU/h	47,800
		KW	14.00
POWER CONSUMPTION		KW	0.183
CASING			GALVANIZED STEEL PLATE
FAN	AIR FLOW RATE	M³/MIN	9.0
		CFM	635
	ESP	Pa	219
AIR FILTER			SYNTHETIC FIBER UNWOVEN CLOTH FILTER (LONG LIFE)
SOUND LEVEL		dB(A)	33
DIMENSIONS (HxWxD)		MM	380X1000X900
MACHINE WEIGHT		KG	75
PIPE CONNECTIONS	LIQUID (FLARE)	MM	Ø9.5
	GAS (BRAZING)		Ø15.9
	DRAIN		O.D. 32
BRAND:			SAMSUNG

AIR COOLED CONDENSING UNIT (ACCU)			
UNIT DESIGNATION			ACCU-3F.A
QUANTITY			2
POWER SOURCE			3Ph/380-400V/60Hz
COOLING CAPACITY		TR	9.55 + 9.55
		KW	33.60 + 33.60
		KCAL/h	28,879 + 28,879
		BTU/h	114,576 + 114,576
POWER CONSUMPTION		KW	6.39 (2)
CAPACITY CONTROL		%	7-100
CASING COLOR			IVORY WHITE (5Y7.5/1)
COMPRESSOR	TYPE		HERMETICALLY SEALED SCROLL TYPE
	MOTOR OUTPUT	KW	6.39 (2)
AIRFLOW RATE		M³/MIN	157+233
DIMENSIONS (H X W X D)		MM	(1695X880X765) (2)
MACHINE WEIGHT		KG	210 + 210
SOUND LEVEL		DB(A)	61 (2)
OPERATION RANGE		°CDB	-5 TO 49
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	6.5+6.5
PIPE CONNECTIONS	LIQUID	MM	Ø 12.7 (BRAZING)
	GAS	MM	Ø 28.6 (BRAZING)
BRAND:			SAMSUNG

VRV SYSTEM-3F.B (3F FLOOR)

FAN COIL UNIT (FCU) - CEILING MOUNTED CASSETTE (ROUND FLOW)			
UNIT DESIGNATION			FCU-3F.B.1 & 3F.B.2
QUANTITY			2
POWER SUPPLY			1PH/208V-230/60HZ
COOLING CAPACITY		TR	4.00
		KCAL/h	12,096
		BTU/h	48,000
		KW	14.07
POWER CONSUMPTION		KW	0.97
CASING			GALVANIZED STEEL PLATE
AIRFLOW RATE (HH/H/L)		M³/MIN	32/26/20
		CFM	1112.45/847.58
SOUND LEVEL (H/L)		dB(A)	43/32
DIMENSION (H X W X D)		MM	1000X66X1000
MACHINE WEIGHT		KG	24
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø 9.5
	GAS (FLARE)		Ø 15.9
	DRAIN	MM	VP25 (EXTERNAL DIA, 32/ INTERNAL DIA, 25)
BRAND:			SAMSUNG

AIR COOLED CONDENSING UNIT (ACCU)			
UNIT DESIGNATION			ACCU-3F.B
QUANTITY			1
POWER SOURCE			3PH/380-400V/60HZ
COOLING CAPACITY		TR	9.54
		KW	33.60
		KCAL/h	28,848
		BTU/h	114,576
POWER CONSUMPTION		KW	6.39
CAPACITY CONTROL		%	15-100
CASING COLOR			IVORY WHITE (5Y7.5/1)
COMPRESSOR	TYPE		HERMETICALLY SEALED SCROLL TYPE
	MOTOR OUTPUT	KW	5.2 x 1
AIRFLOW RATE		M³/MIN	178
DIMENSIONS (H X W X D)		MM	(1,657x930x765)
MACHINE WEIGHT		KG	210
SOUND LEVEL		DB(A)	62
OPERATION RANGE		°CDB	-5 TO 49
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	6.5
PIPE CONNECTIONS	LIQUID	MM	Ø 12.7 (BRAZING)
	GAS	MM	Ø 28.6 (BRAZING)
BRAND:			SAMSUNG

ENERGY RECOVERY VENTILATOR (ERV)				
UNIT DESIGNATION				ERV-3F.B
QUANTITY				1
LOCATION				3RD FLOOR
TR				2.98
REFRIGERANT				R-401A
POWER SUPPLY				1PH/220-240V/50HZ
AIR FILTER RATE & STATIC PRESSURE (NOTE 7)	ULTRA-HIGH	AIRFLOW RATE	M³/H	750
		STATIC PRESSURE	Pa	170
	ULTRA-HIGH	AIRFLOW RATE	M³/H	750
		STATIC PRESSURE	Pa	120
	LOW	AIRFLOW RATE	M³/H	640
		STATIC PRESSURE	Pa	80
POWER CONSUMPTION	HEAT EXCHANGER MODE	ULTRA-HIGH	W	620
		HIGH		560
		LOW		470
	BYPASS MODE	ULTRA-HIGH	W	620
		HIGH		560
		LOW		470
FAN TYPE				SIROCCO FAN
MOTOR OUTPUT			KW	0.280 x 2
SOUND LEVEL (NOTE 5) (220/230/240V)	HEAT EXCHANGER MODE	ULTRA-HIGH	dB(A)	40/41/41.5
		HIGH		37.5/38/39
		LOW		34.5/36/37
	BYPASS MODE	ULTRA-HIGH	dB(A)	40/41/41.5
		HIGH		37.5/38/39
		LOW		34.5/36/37
TEMP. EXCHANGE EFFICIENCY	ULTRA-HIGH		%	78
	HIGH			78
	LOW			79
ENTHALPY EXCHANGE EFFICIENCY (COOLING)	ULTRA-HIGH		%	86
	HIGH			66
	LOW			68
CASING				GALVANIZED STEEL PLATE
INSULATING MATERIAL				SELF-EXTINGUISHABLE URETHANE FOAM
HEAT EXCHANGER SYSTEM				AIR TO AIR CROSS FLOW TOTAL HEAT (SENSIBLE + LATENT HEAT) EXCHANGER)
HEAT EXCHANGER ELEMENT				SPECIALTY PROCESSED NONFLAMMABLE PAPER
AIR FILTER				MULTI-DIRECTIONAL FIBROUS FLEECE
DIMENSIONS	HEIGHT		MM	387
	WIDTH			1,764
	DEPTH			1,214
CONNECTION DUCT DIAMETER			MM	Ø250
MACHINE WEIGHT	NET		KG	109
UNIT AMBIENT CONDITION	AROUND UNIT			0°C-40°C DB, 80%RH OR LESS
	OA (NOTE 9)			-15°C-40°C DB, 80%RH OR LESS
	RA (NOTE 9)			0°C-40°C DB, 80%RH OR LESS
CONNECTABLE OUTDOOR UNITS				RX(Y)Q5-54PAY1, RX(Y)Q16-50PAHY1
BRAND:				SAMSUNG

VRV SYSTEM-3F.C (3F FLOOR)

FAN COIL UNIT (FCU) - WALL MOUNTED TYPE				
UNIT DESIGNATION			FCU-3F.C.1 TO 3F.C.5	FCU-3F.C.6
QUANTITY			5	1
POWER SUPPLY			1PH/220V-240/60HZ	
COOLING CAPACITY		TR	1.0	1.67
		KCAL/h	3,024	5,050
		BTU/h	12,000	20,000
		KW	3.52	5.90
POWER CONSUMPTION		KW	0.017	0.032
CASING			WHITE (3.0Y8.5/0.5)	
AIRFLOW RATE (HH/H/L)		M³/MIN	8.5/5.5	15/12
		CFM	300/194	530/424
SOUND LEVEL (H/L)		dB(A)	36/29	42/37
DIMENSION (H X W X D)		MM	285X810X227	298X1065X243
MACHINE WEIGHT		KG	9.0	12.5
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø 6.4	Ø 6.4
	GAS (FLARE)		Ø 12.7	Ø 12.7
	DRAIN	MM	VP25 (EXTERNAL DIA, 32/ INTERNAL DIA, 25)	
BRAND:			SAMSUNG	

FAN COIL UNIT (FCU) - CEILING MOUNTED CASSETTE (ROUND FLOW)			
UNIT DESIGNATION			FCU-3F.C.7 & 3F.C.8
QUANTITY			2
POWER SUPPLY			1PH/220V-240/60HZ
COOLING CAPACITY		TR	1.50
		KCAL/h	4,536
		BTU/h	18,000
		KW	5.28
POWER CONSUMPTION		KW	0.065
CASING			GALVANIZED STEEL PLATE
AIRFLOW RATE (HH/H/L)		M³/MIN	15/11
		CFM	530/388
SOUND LEVEL (H/L)		dB(A)	39/33
DIMENSION (H X W X D)		MM	1000X66X1000
MACHINE WEIGHT		KG	21
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø 6.4
	GAS (FLARE)		Ø 12.7
	DRAIN	MM	VP25 (EXTERNAL DIA, 32/INTERNAL DIA, 25)
BRAND:			SAMSUNG

FRESH AIR INTAKE (FAI)			
UNIT DESIGNATION			FAI-3F.C
QUANTITY			1
LOCATION			3RD FLOOR
POWER SOURCE			1PH/230V/60HZ
COOLING CAPACITY		TR	3.98
		KCAL/h	12,045
		BTU/h	47800
		KW	14
POWER CONSUMPTION		KW	0.183
CASING			GALVANIZED STEEL PLATE
FAN	AIR FLOW RATE	M³/MIN	9.0
		CFM	318
	ESP	Pa	219
AIR FILTER			SYNTHETIC FIBER UNWOVEN CLOTH FILTER (LONG LIFE)
SOUND LEVEL		dB(A)	33
DIMENSIONS (HxWxD)		MM	380X1000X900
MACHINE WEIGHT		KG	75
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø9.5
	GAS (BRAZING)		Ø15.9
	DRAIN		O.D. 32
BRAND:			SAMSUNG

AIR COOLED CONDENSING UNIT (ACCU)			
UNIT DESIGNATION			ACCU-3F.C
QUANTITY			1
POWER SOURCE			3PH/380-415V/60HZ
COOLING CAPACITY		TR	14.32
		KW	50.40
		KCAL/h	43,302
		BTUH	171,864
POWER CONSUMPTION		KW	6.39 (2)
CAPACITY CONTROL		%	8-100
CASING COLOR			IVORY WHITE (5Y7.5/1)
COMPRESSOR	TYPE		HERMETICALLY SEALED SCROLL TYPE
	MOTOR OUTPUT	KW	6.39 (2)
AIRFLOW RATE		M³/MIN	157 + 165
DIMENSIONS (H X W X D)		MM	(1,657x1295x765)
MACHINE WEIGHT		KG	307
SOUND LEVEL		DB(A)	64
OPERATION RANGE		°CDB	-5 TO 49
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	5.9+6.0
PIPING CONNECTIONS	LIQUID	MM	Ø 15.9 (BRAZING)
	GAS	MM	Ø 28.6 (BRAZING)
BRAND:			SAMSUNG

VRV SYSTEM-3F.D (3F FLOOR)

FAN COIL UNIT (FCU) - CEILING MOUNTED CASSETTE (ROUND FLOW)			
UNIT DESIGNATION			FCU-3F.D.1 TO 3F.D.10
QUANTITY			10
POWER SUPPLY			1PH/220V-240/ 60HZ
COOLING CAPACITY		TR	3.0
		KCAL	9,072
		BTU/H	36,000
		KW	10.55
POWER CONSUMPTION		KW	0.097
CASING			GALVANIZED STEEL PLATE
AIRFLOW RATE (HH/H/L)		M³/MIN	32/26/20
		CFM	1130/918/706
SOUND LEVEL (H/L)		dB(A)	43/38
DIMENSION (H X W X D)		MM	365X947X947
MACHINE WEIGHT		KG	24
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø 9.5
	GAS (FLARE)		Ø 15.9
	DRAIN	MM	VP25 (EXTERNAL DIA, 32/INTERNAL DIA, 25)
BRAND:			SAMSUNG

FRESH AIR INTAKE (FAI)			
UNIT DESIGNATION			FAI-3F.D.1 & 3F.D.2
QUANTITY			2
LOCATION			3RD FLOOR
POWER SOURCE			1PH/208-230V/60HZ
COOLING CAPACITY		TR	3.98
		KCAL/h	12,045
		BTU/h	47,800
		KW	14
POWER CONSUMPTION		KW	0.183
CASING			GALVANIZED STEEL PLATE
FAN	AIR FLOW RATE	M³/MIN	9.0
		CFM	318
	ESP	Pa	219
AIR FILTER			SYNTHETIC FIBER UNWOVEN CLOTH FILTER (LONG LIFE)
SOUND LEVEL		dB(A)	42
DIMENSIONS (HxWxD)		MM	380X1000X900
MACHINE WEIGHT		KG	75
PIPING CONNECTIONS	LIQUID (FLARE)	MM	Ø9.5
	GAS (BRAZING)		Ø15.9
	DRAIN		O.D. 32
BRAND:			SAMSUNG

AIR COOLED CONDENSING UNIT (ACCU)			
UNIT DESIGNATION			ACCU-3F.D
QUANTITY			3
POWER SOURCE			3PH/380-415V/60HZ
COOLING CAPACITY		TR	14.32 (3)
		KW	50.4 (3)
		KCAL/h	43,302 (3)
		BTU/h	171,864 (3)
POWER CONSUMPTION		KW	6.39 (2) (3)
CAPACITY CONTROL		%	3-100
CASING COLOR			IVORY WHITE (5Y7.5/1)
COMPRESSOR	TYPE		HERMETICALLY SEALED SCROLL TYPE
	MOTOR OUTPUT	KW	6.39 (2) (3)
AIRFLOW RATE		M³/MIN	233+233+233
DIMENSIONS (H X W X D)		MM	(1657X1295X765)/(3)
MACHINE WEIGHT		KG	307 (3)
SOUND LEVEL		DB(A)	64 (3)
OPERATION RANGE		°CDB	-5 TO 49
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	8.4 (3)
PIPE CONNECTIONS	LIQUID	MM	Ø 15.88 (3) (BRAZING)
	GAS	MM	Ø 28.58 (3) (BRAZING)
BRAND:			SAMSUNG

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P.DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	EQUIPMENT SCHEDULE	M1-03

EQUIPMENT SCHEDULE

TOILET EXHAUST FANS (TEF) - GROUND FLOOR

UNIT DESIGNATION		TEF-GF.1, GF.6, GF.7, GF.12, GF.13, GF.18, GF.19, GF.24, GF.25 & GF.30	TEF-GF.2, GF.5, GF.8, GF.11, GF.14, GF.17, GF.20, GF.23, GF.26, GF.29, 3F.3 & 3F.4	TEF-GF.3, GF.4, GF.9, GF.10, GF.15, GF.16, GF.21, GF.22, GF.27 & GF.28	TEF-2F.1 & 2F.2	TEF-3F.1 & 3F.2
QTY.		10	12	10	2	2
LOCATION		GROUND FLOOR	GROUND AND 3RD FLOOR	GROUND FLOOR	2ND FLOOR	3RD FLOOR
POWER SUPPLY (V/PH/Hz)		338-400/3/60	230/1/60	230/1/60	230/1/60	230/1/60
AIR VOLUME (CFM)	COMPUTED	1494	144	714	495	214
	SELECTED	2648	390	842	706	390
EXTERNAL STATIC PRESSURE (Pa)		150	160	250	250	200
TYPE		IN-LINE CABINET	CASSETTE	IN-LINE CABINET (CENTRIFUGAL)	IN-LINE CABINET (CENTRIFUGAL)	CASSETTE
CONSUMPTION (KW)		1.45	0.065	0.38	.3	0.065
FAN SPEED (R.P.M)		684	439	1167	1155	509
NOISE dB (A)		53.1	42	60.8	60.4	42
WEIGHT (Kg)		60	9.7	24	18	10.4
BRAND:		NIAGARA				

EXHAUST FAN (EF) - UTILITY BUILDING SOUTH WEST

UNIT DESIGNATION		EF-U.1 & EF-U.2	EF-U.3, EF-U.4 & EF-U.5	EF-U.6 & EF-U.7	EF-U.8, EF-U.9 & EF-U.10
QTY.		2	3	2	3
LOCATION		METERING VAULT	TRANSFORMER ROOM	LVSG	GENSET
POWER SUPPLY (V/PH/Hz)		230 / 1 / 60	230 / 1 / 60	230 / 1 / 60	230 / 1 / 60
AIR VOLUME (CFM)	COMPUTED	1000	8293	2200	8116
	SELECTED	1530	4179	3769	4240
EXTERNAL STATIC PRESSURE (Pa)		10	10	40	40
TYPE		WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED
CONSUMPTION (KW)		0.17	0.326	0.325	0.326
FAN SPEED (R.P.M)		1400	1575	1400	1575
NOISE dB (A)		63	51	54	51
WEIGHT (Kg)		6.1	22.5	19	22.5
BRAND:		NIAGARA			

EXHAUST FANS (EF) - GROUND, SECOND & THIRD FLOOR

UNIT DESIGNATION		EF-GF.1, GF.2, GF.3, GF.4, & GF.5	EF-GF.13, GF.14, GF.15, GF.16 & 2F.2	EF-GF.12	EF-GF.10, GF.11, & GF.17	EF-2F.1	EF-3F.1
QTY.		5	5	1	3	1	1
LOCATION		GROUND FLOOR	GROUND |& 2ND FLOOR	GROUND FLOOR	GROUND FLOOR	2ND FLOOR	3RD FLOOR
POWER SUPPLY (V/PH/Hz)		220/1/60	220/1/60	230/1/60	230/1/60	230/1/60	230/1/60
AIR VOLUME (CFM)	COMPUTED	124	103	252	400	200	354
	SELECTED	194	230	294	706	365	471
EXTERNAL STATIC PRESSURE (Pa)		50	80	200	250	200	220
TYPE		CASSETTE	CASSETTE	CASSETTE	IN-LINE CABINET (CENTRIFUGAL	IN-LINE CABINET (CENTRIFUGAL	IN-LINE CABINET (CENTRIFUGAL
CONSUMPTION (KW)		0.048	0.065	0.065	0.375	0.128	0.19
FAN SPEED (R.P.M)		760	540	509	1155	997	1058
NOISE dB (A)		38	42	42	60.4	56.3	57.8
WEIGHT (Kg)		10.4	5.6	10.4	18	14	18
BRAND:		NIAGARA					

EXHAUST FAN (EF) - UTILITY BUILDING NORTH EAST

UNIT DESIGNATION		EF-U.11, EF-U.12, & EF-U.13	EF-U.14, EF-U.15 & EF-U.16	EF-U.17 & EF-U.18	EF-U.19, EF-U.20 & EF-U.21
QTY.		3	3	2	3
LOCATION		PUMP ROOM	GENSET ROOM	LVSG	TRANSFORMER ROOM
POWER SUPPLY (V/PH/Hz)		230 / 1 / 60	230 / 1 / 60	230 / 1 / 60	230 / 1 / 60
AIR VOLUME (CFM)	COMPUTED	7940	8116	2200	8293
	SELECTED	5650	5650	3769	4240
EXTERNAL STATIC PRESSURE (Pa)		40	40	40	40
TYPE		WALL MOUNTED	WALL MOUTNED	WALL MOUNTED	WALL MOUNTED
CONSUMPTION (KW)		0.326	0.326	0.325	0.326
FAN SPEED (R.P.M)		766	766	1400	1575
NOISE dB (A)		51	51	54	51
WEIGHT (Kg)		22.5	22.5	19	22.5
BRAND:		NIAGARA			

KITCHEN RANGEHOOD (KRH) - THIRD FLOOR

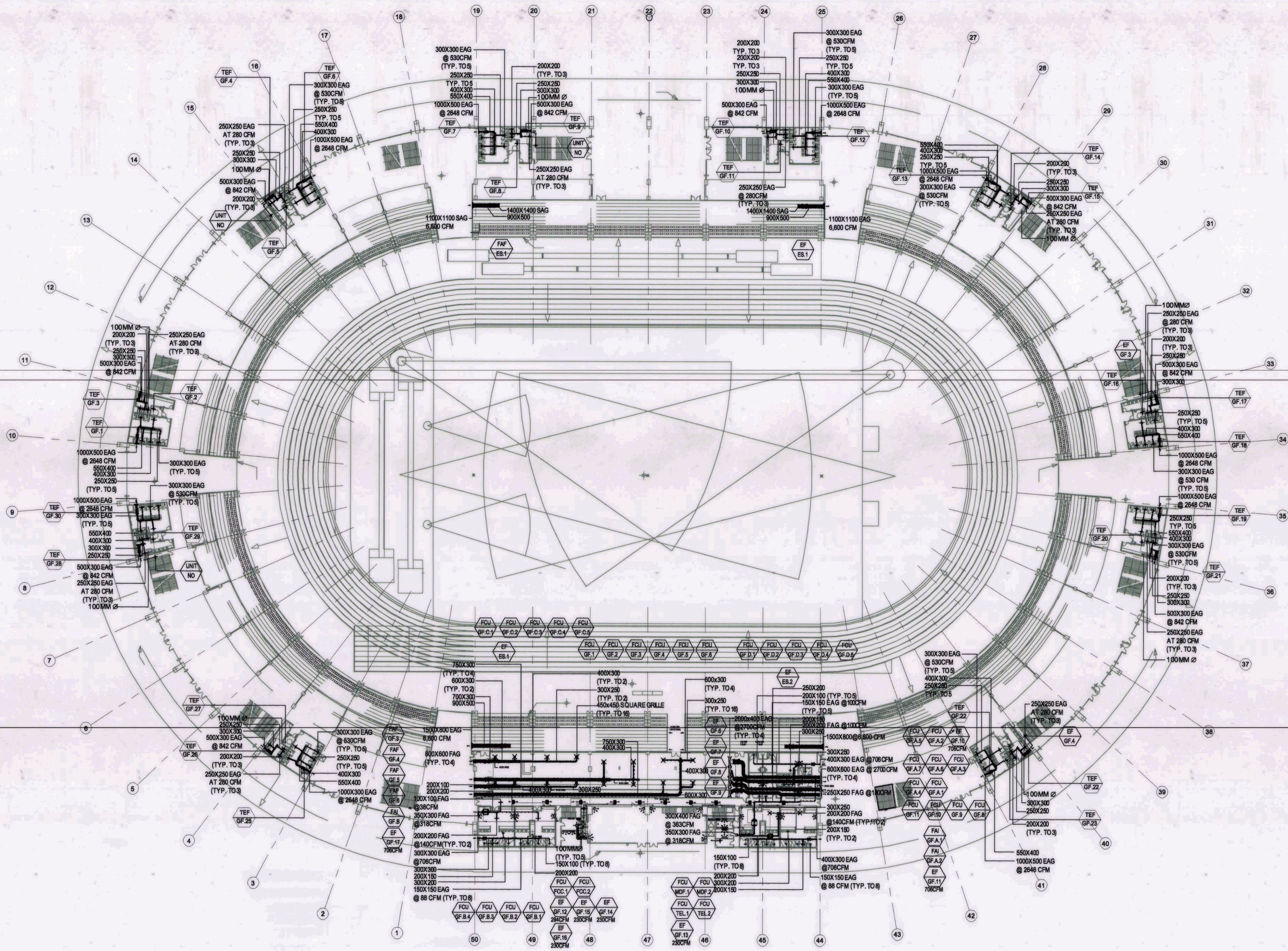
UNIT DESIGNATION		KRH-3F.1
QTY.		1
LOCATION		3RD FLOOR
POWER SUPPLY (V/PH/Hz)		230/1/60
AIR VOLUME (CFM)	SELECTED	160
EXTERNAL STATIC PRESSURE (Pa)		100
TYPE		KITCHEN RANGEHOOD
CONSUMPTION (KW)		0.127
FAN SPEED (R.P.M)		905
NOISE dB (A)		38
WEIGHT (Kg)		18
BRAND:		NIAGARA

FRESH AIR FANS (FAF) & EXHAUST FAN (EF) - GROUND FLOOR

UNIT DESIGNATION		FAF-ES.1, FAF-ES.2, EF-ES.1 & EF-ES.2	EF-GF.6 TO EF-GF.9 & FAF-GF.3 TO FAF-GF.6
QTY.		4	8
LOCATION		GROUND FLOOR	GROUND FLOOR
POWER SUPPLY (V/PH/Hz)		380-400 / 3 / 60	380-400 / 3 / 60
AIR VOLUME (CFM)	COMPUTED	7262	2648
	SELECTED	6600	2700
EXTERNAL STATIC PRESSURE (Pa)		200	536
TYPE		VANE AXIAL	VANE AXIAL
CONSUMPTION (KW)		1.50	2.20
FAN SPEED (R.P.M)		1150	1750
NOISE dB (A)		86	92
WEIGHT (Kg)		72	44
BRAND:		NIAGARA	

NOTE:
EF-GF.1 TO GF.5, EF-U.3 TO U.5, EF-U.8 TO U.16, EF-U.19 TO U.21, EF-ES.1 TO ES.2 AND FAF-ES.1 TO ES.2
CHANGE IN CAPACITY DUE TO TCGI COMMENT ON NGAC-AS-ME-05 FAN/VENTILATION CALCULATION. RESPONSE ON 11/05/18
AND TCGI CLOSED FAN/VENTILATION CALCULATION ITEM DATE RELEASE 11/20/18.

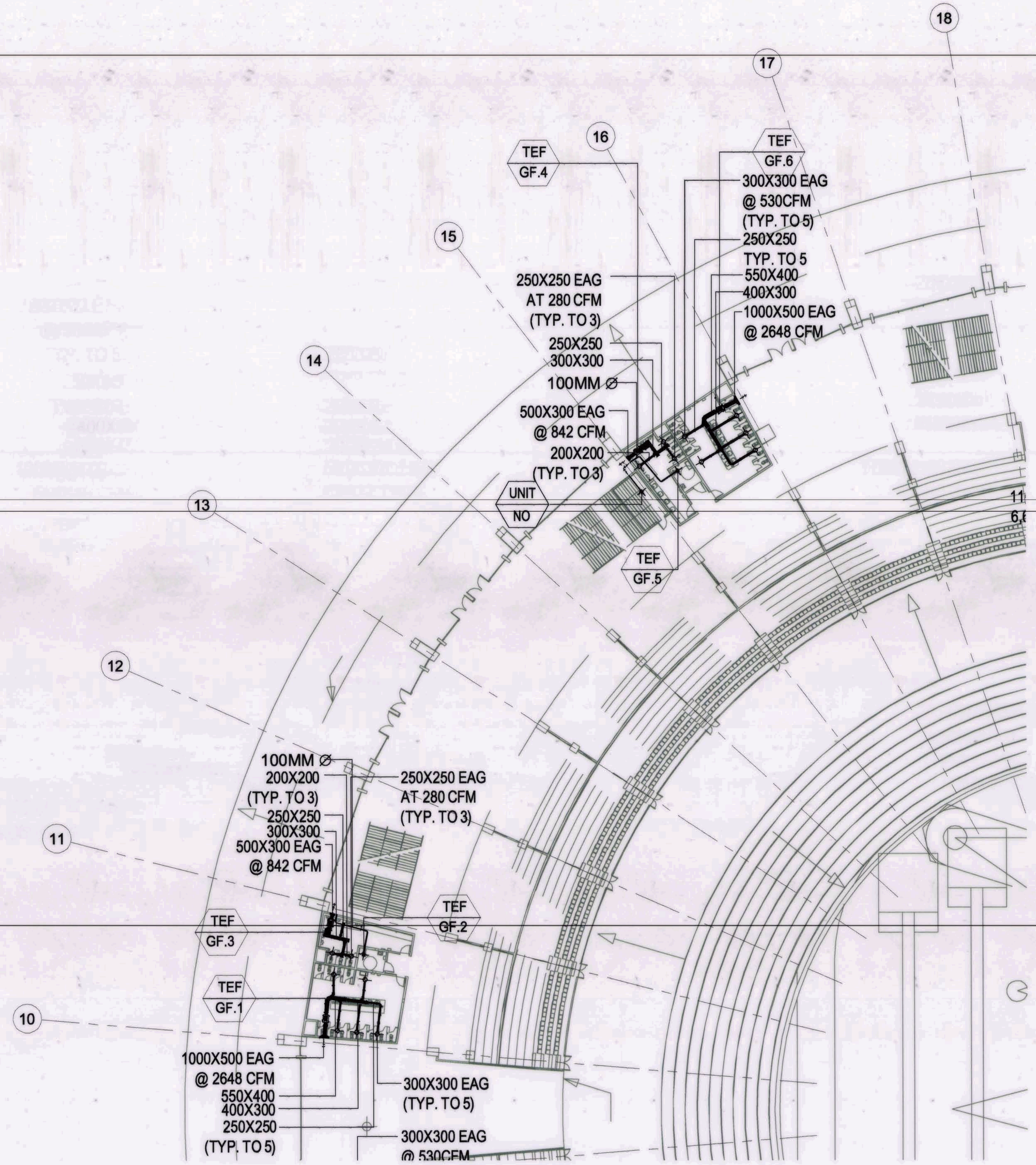
OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT; PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION; ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants; ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC.; ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS; VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	EQUIPMENT SCHEDULE	M1-04



GROUND FLOOR AC/VENT LAYOUT

SCALE 1:500

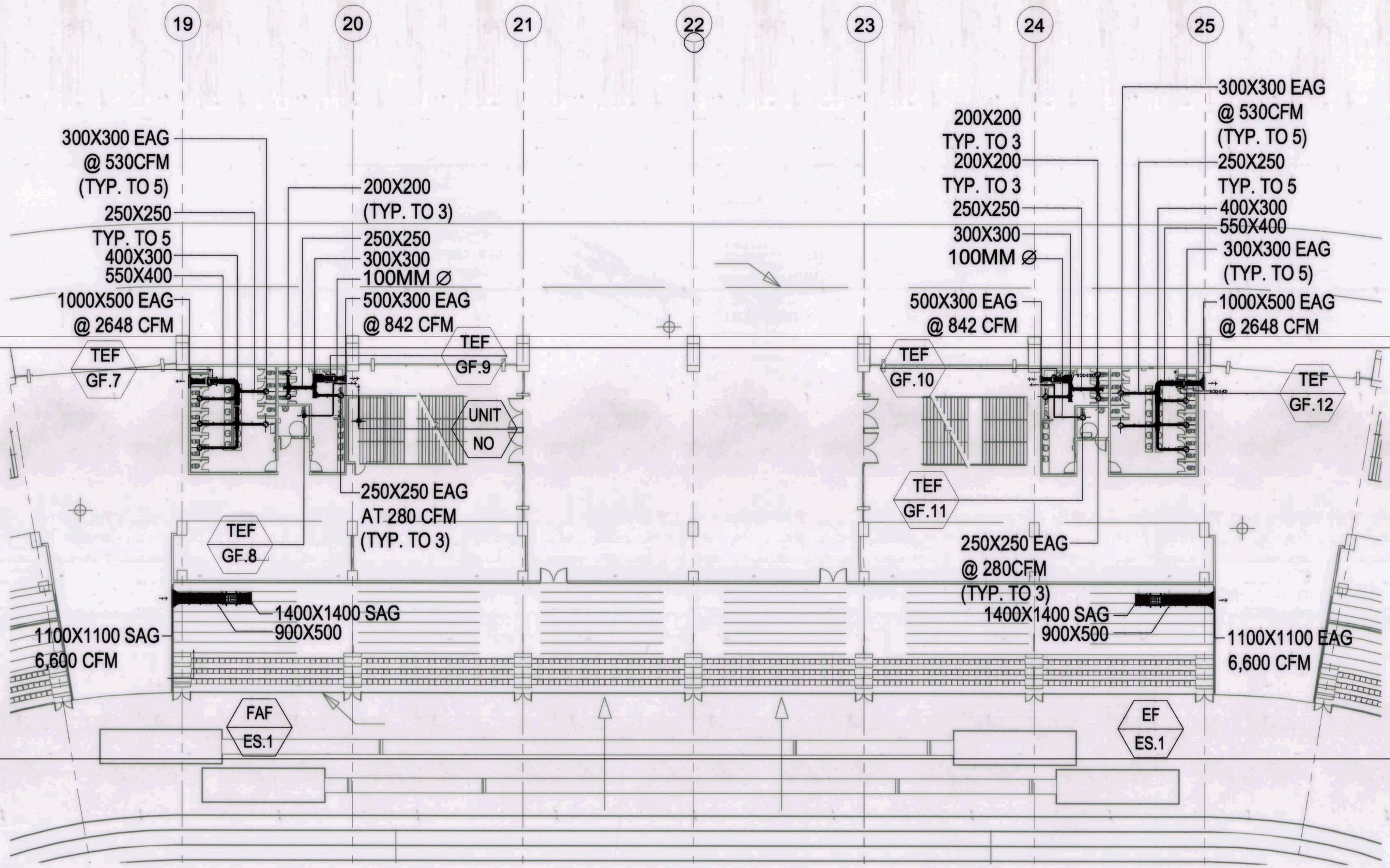
OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark Inc. — PATRICK NICHOLAS P.DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1680 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL #:(02)654-4152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 8th Floor Ayuna Mitsubishi Bldg. 1049 Ayuna Blvd. Quezon City Philippines 111 Tel. (632) 421-2871 to 74 Fax. (632) 421-2431 Email : fildravo@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS *8th Flr. Fellize Bldg., 109 V.A. Rufino St. Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178211 to 16* VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	GROUND FLOOR AC & VENT LAY OUT	M2-01



NORTH EAST GROUND FLOOR AC/VENT LAYOUT

SCALE 1:250

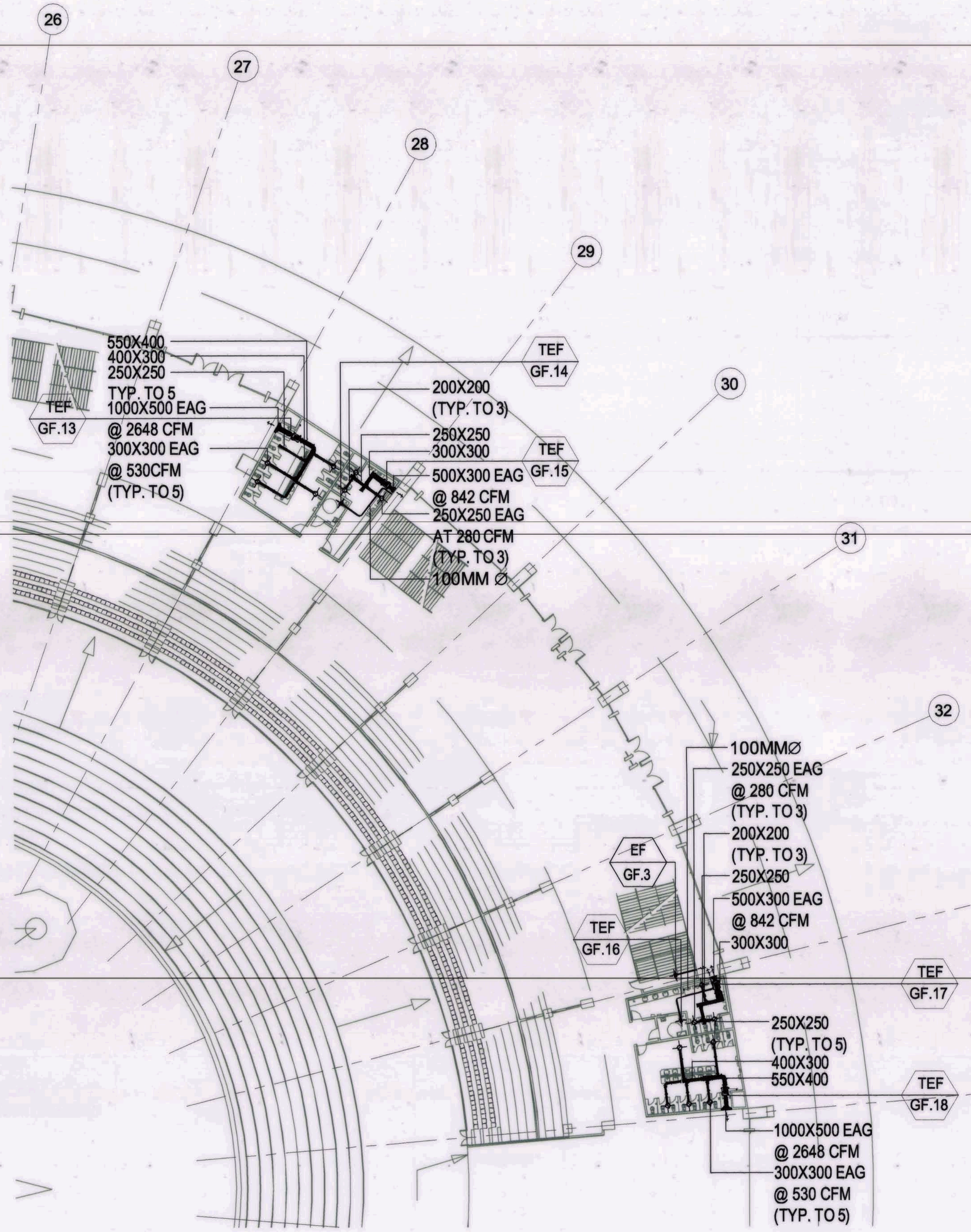
OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1835 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL. #(02)554-4152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 6th Floor Aurora Milestone Bldg. 1046 Aurora Blvd. Quezon City Philippines 111 Tel. (632) 421-2851 to 74 Fax: (632) 421-2431 Email : fildravo@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS 8th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8173311 to 16 VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	NORTH EAST GROUND FLOOR AC/VENT LAYOUT	M2-01A



EAST GROUND
FLOOR AC/VENT LAYOUT

SCALE 1:250

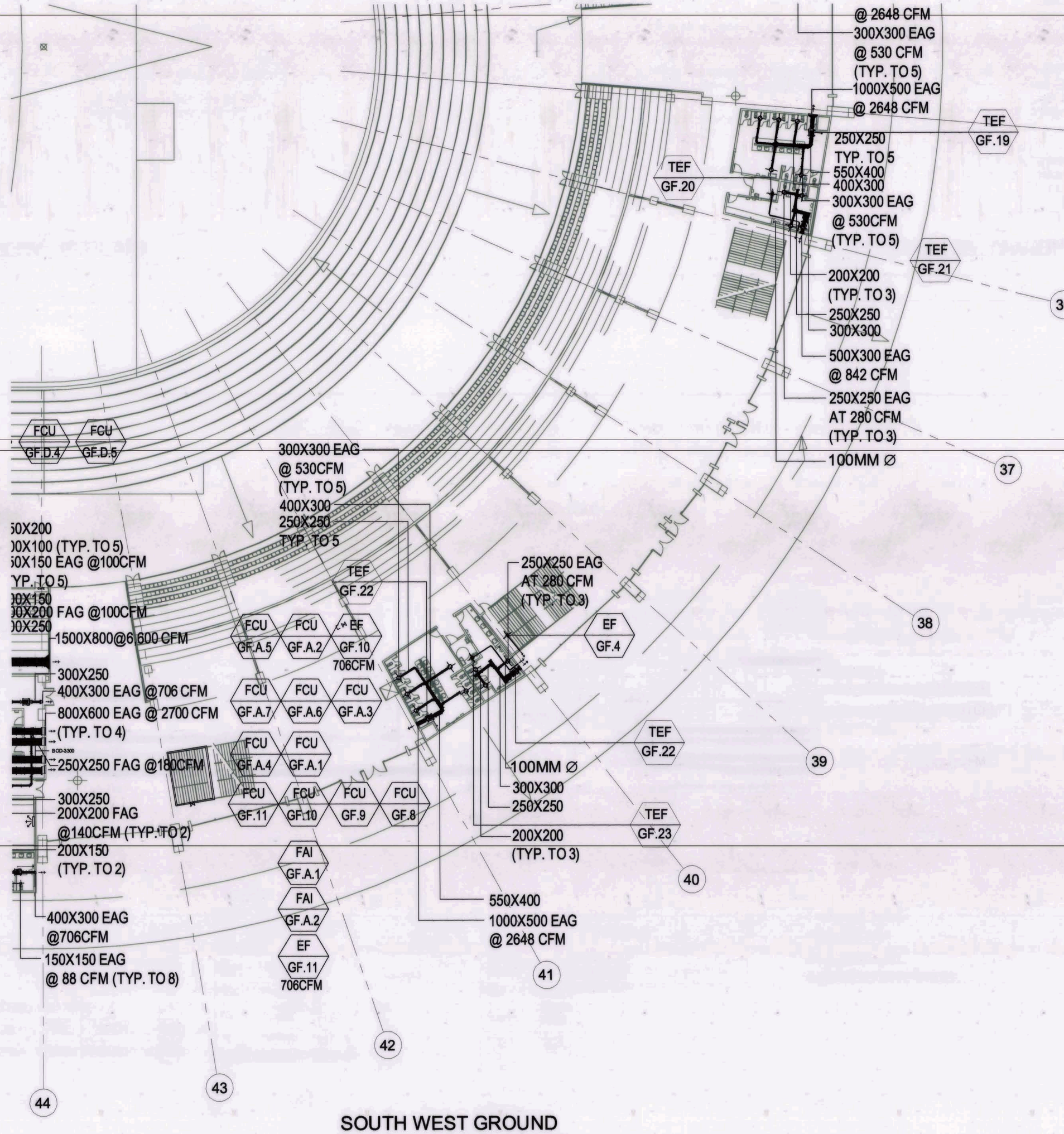
OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1635 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL #(02)654-4152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 8th Floor Aurora Miniplaza Bldg. 1049 Aurora Blvd. Quezon City Philippines 111 Tel. (632) 421-2971 to 74 Fax. (632) 421-2431 Email : fildravo@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS 9th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8175311 to 16 VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	EAST GROUND FLOOR AC/VENT LAYOUT	M2-01B



SOUTH EAST GROUND FLOOR AC/VENT LAYOUT

SCALE 1:250

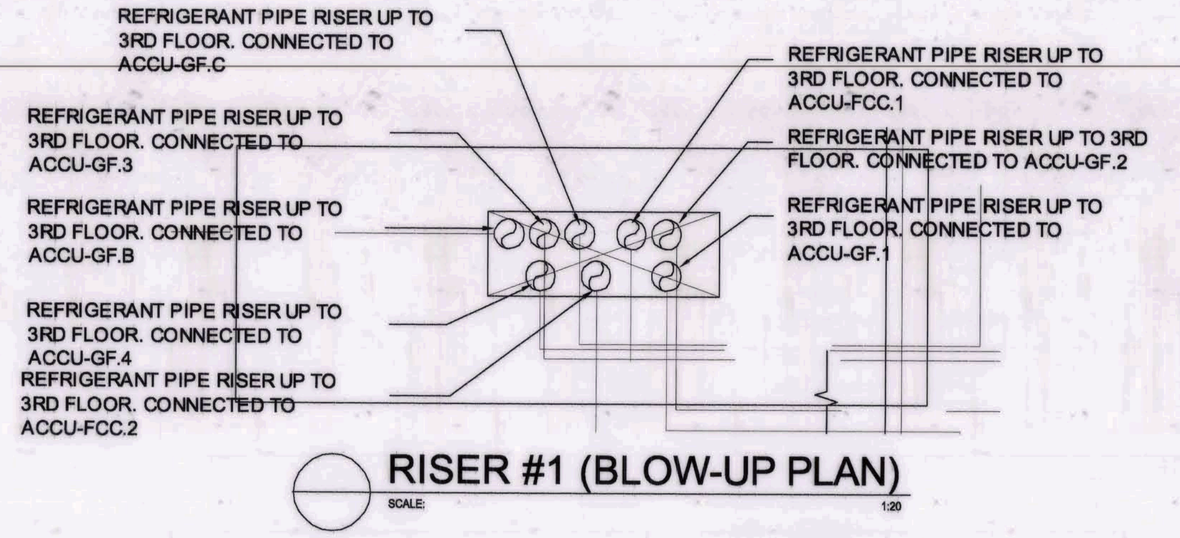
OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1855 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL. #(632)654-4152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg., 1045 Aurora Blvd., Cubao, Quezon City Philippines 111 Tel. (632) 421-0971 to 74, Fax: (632) 427-2451 Email : fildravo@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS 5th Flr. Felitza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8176311 to 16 VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	SOUTH EAST GROUND FLOOR AC/VENT LAYOUT	M2-01C



SOUTH WEST GROUND FLOOR AC/VENT LAYOUT

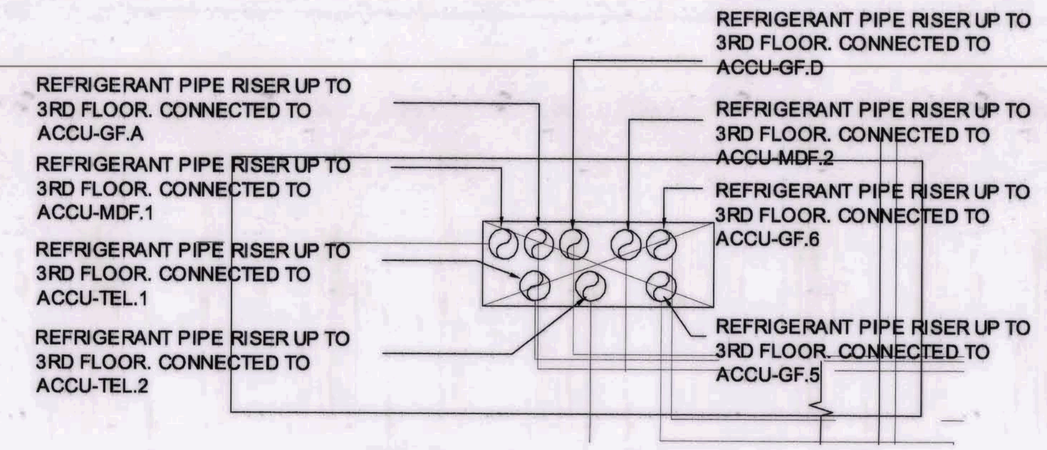
SCALE 1:250

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1836 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL. #(02)654-4152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg. 1045 Aurora Blvd. Quezon City Philippines 111 Tel. (632) 421-0971 to 74 Fax: (632) 421-2431 Email : fildravo@pmb.com.ph Website: www.fildravo.com ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS 8th Flr. Felize Bldg., 109 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8175311 to 16 VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	SOUTH WEST GROUND FLOOR AC/VENT LAYOUT	M2-01D



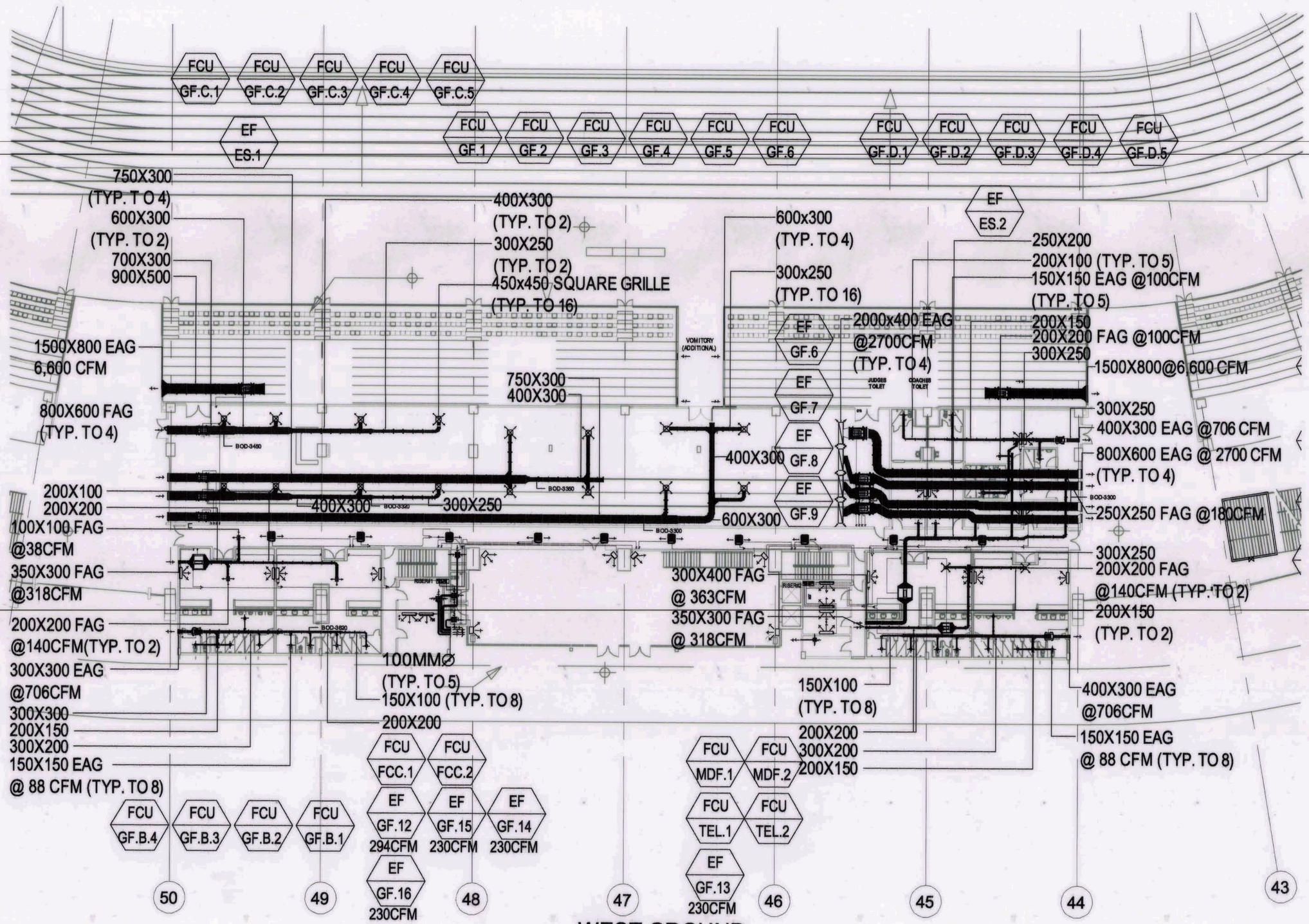
RISER #1 (BLOW-UP PLAN)

SCALE: 1:20



RISER #2 (BLOW-UP PLAN)

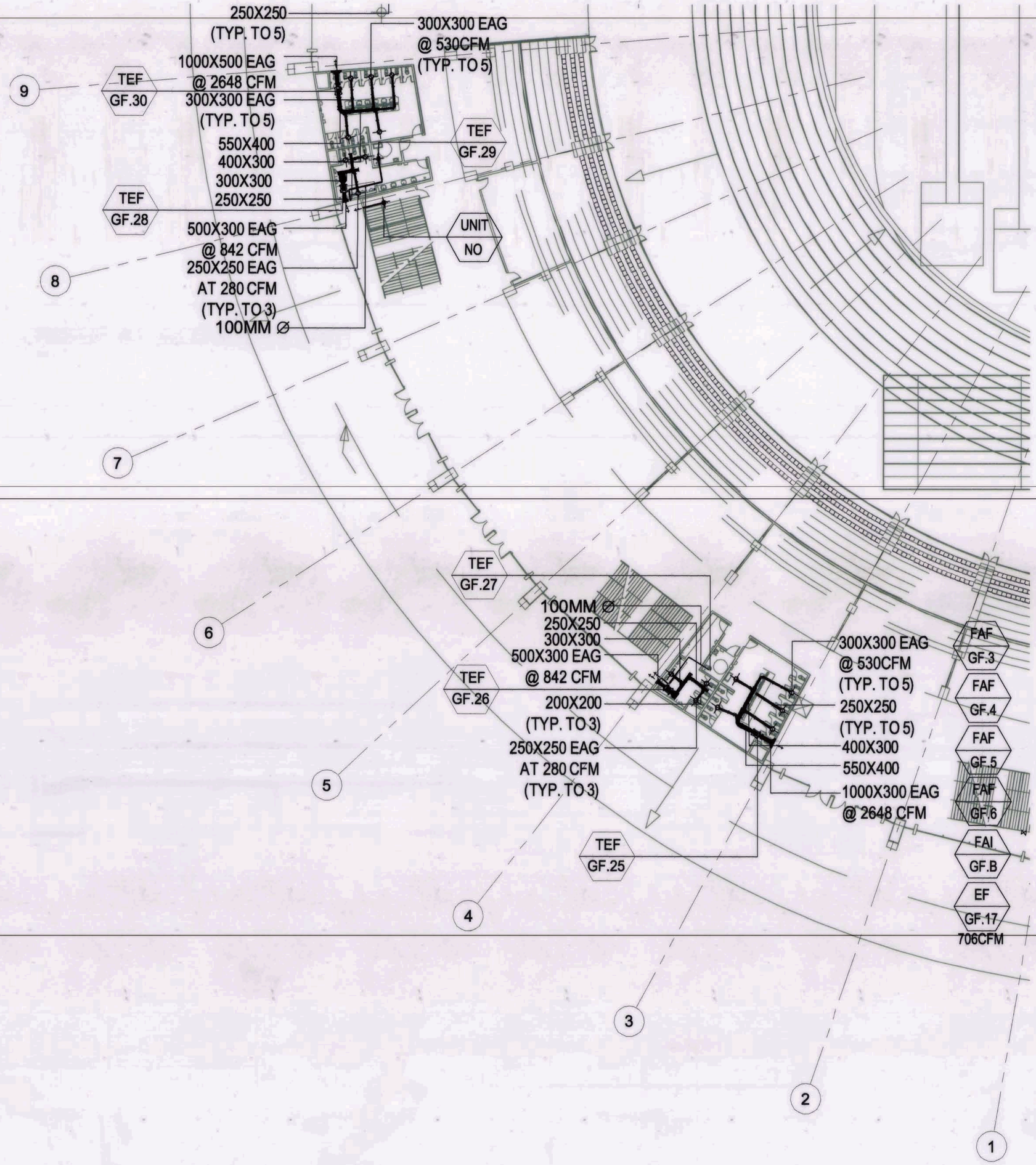
SCALE: 1:20



WEST GROUND FLOOR AC/VENT LAYOUT

SCALE 1:250

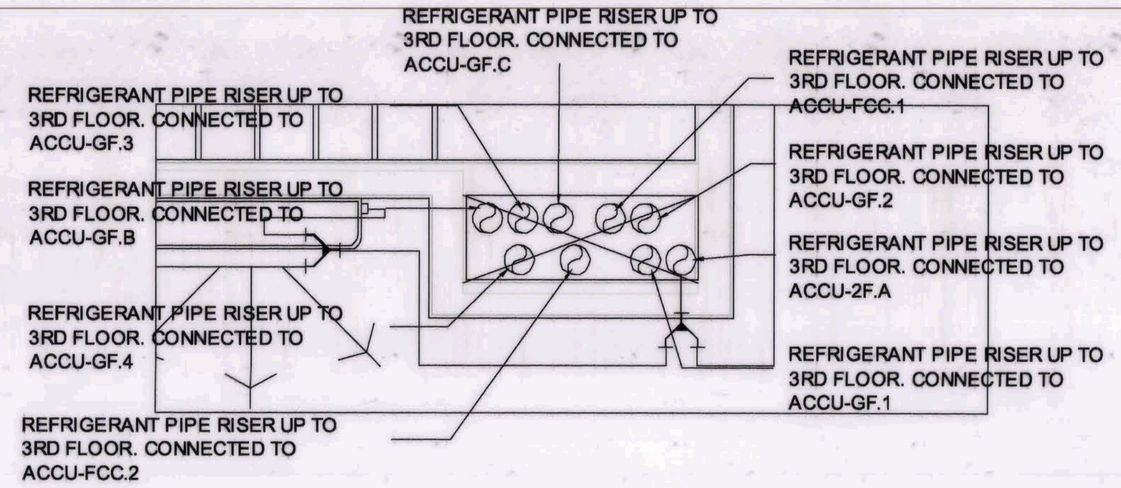
OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1835 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	GROUND FLOOR AC & VENT LAY OUT	M2-01E



NORTH WEST GROUND FLOOR AC/VENT LAYOUT

SCALE 1:250

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1835 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL. #(02)954-4152 to 58 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg., 1045 Aurora Blvd. Quezon City Philippines 111,Tel. (632) 421-2871 to 74 Fax. (632) 421-2431 Email : fildrav@info.com.ph Website: www.fildrav.com ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS 9th Flr. Felize Bldg., 109 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 19 VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	NORTH WEST GROUND FLOOR AC/VENT LAYOUT	M2-01F



RISER #1 (BLOW-UP PLAN)

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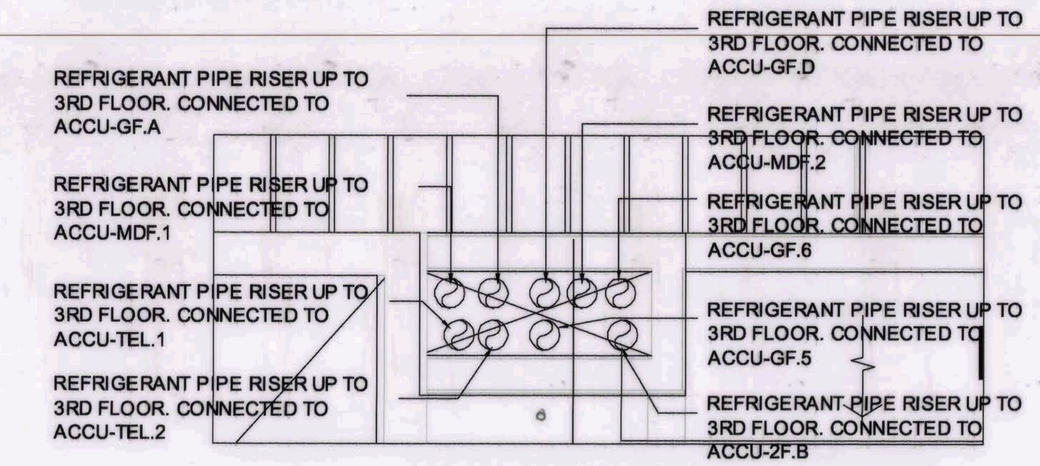

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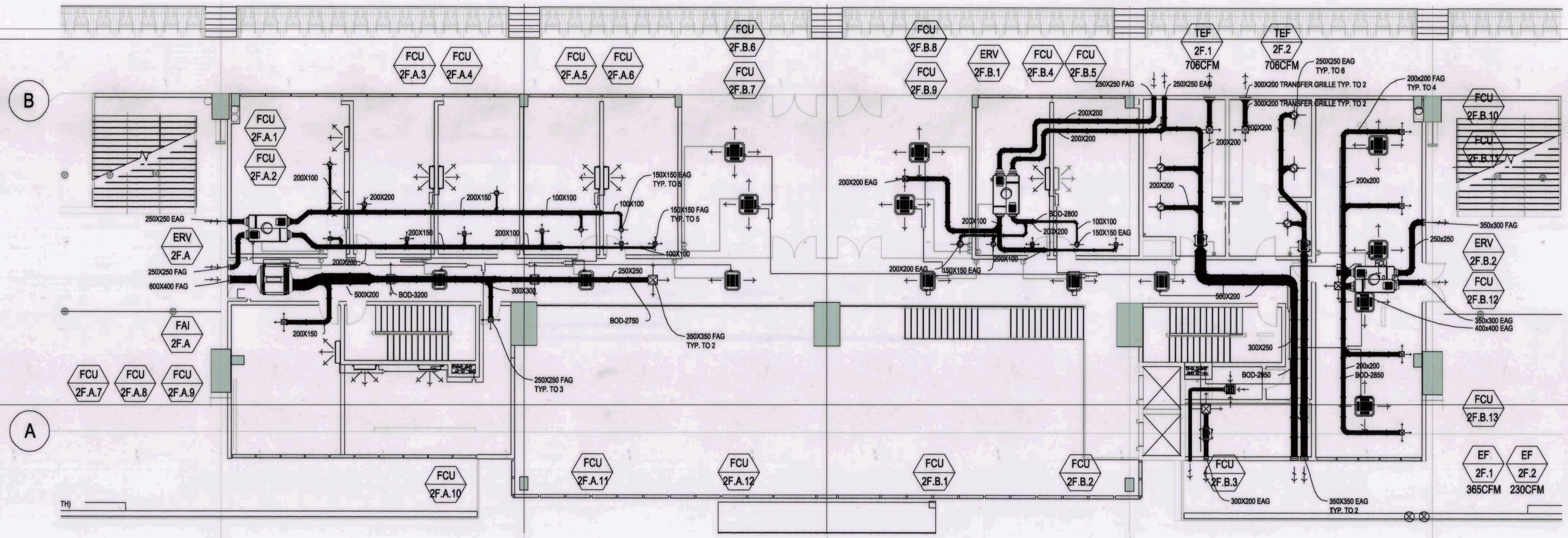

WEST STAND SECOND FLOOR AC/ VENT LAY OUT

1 M2-02 SCALE: 1:100

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
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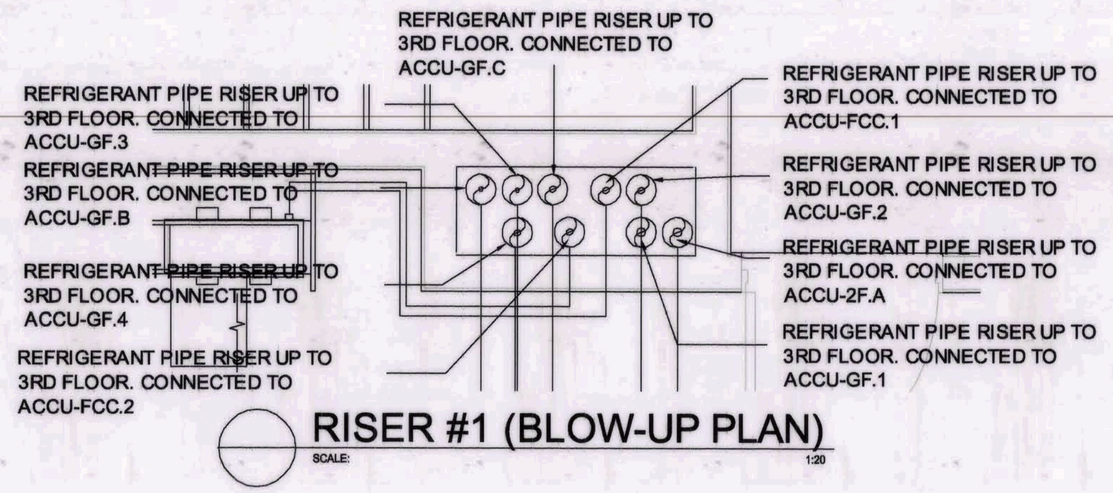
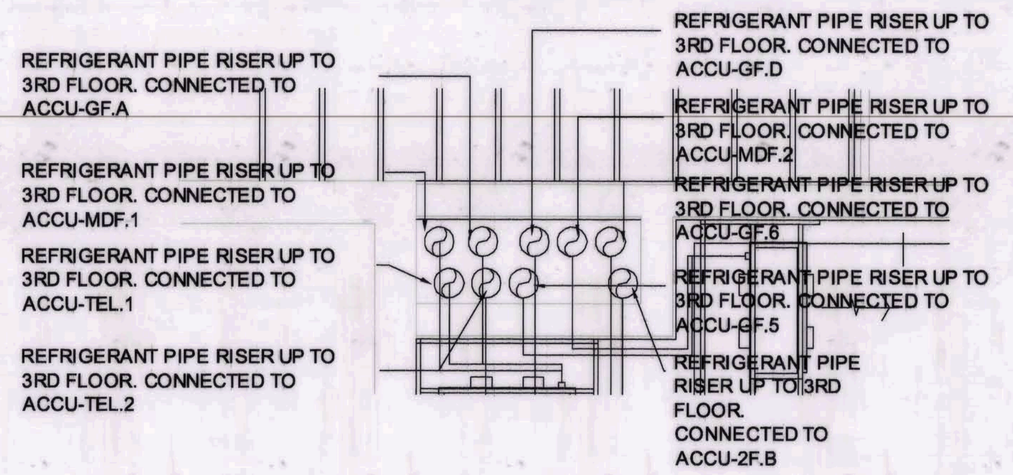


RISER #1 (BLOW-UP PLAN)
SCALE: 1:20



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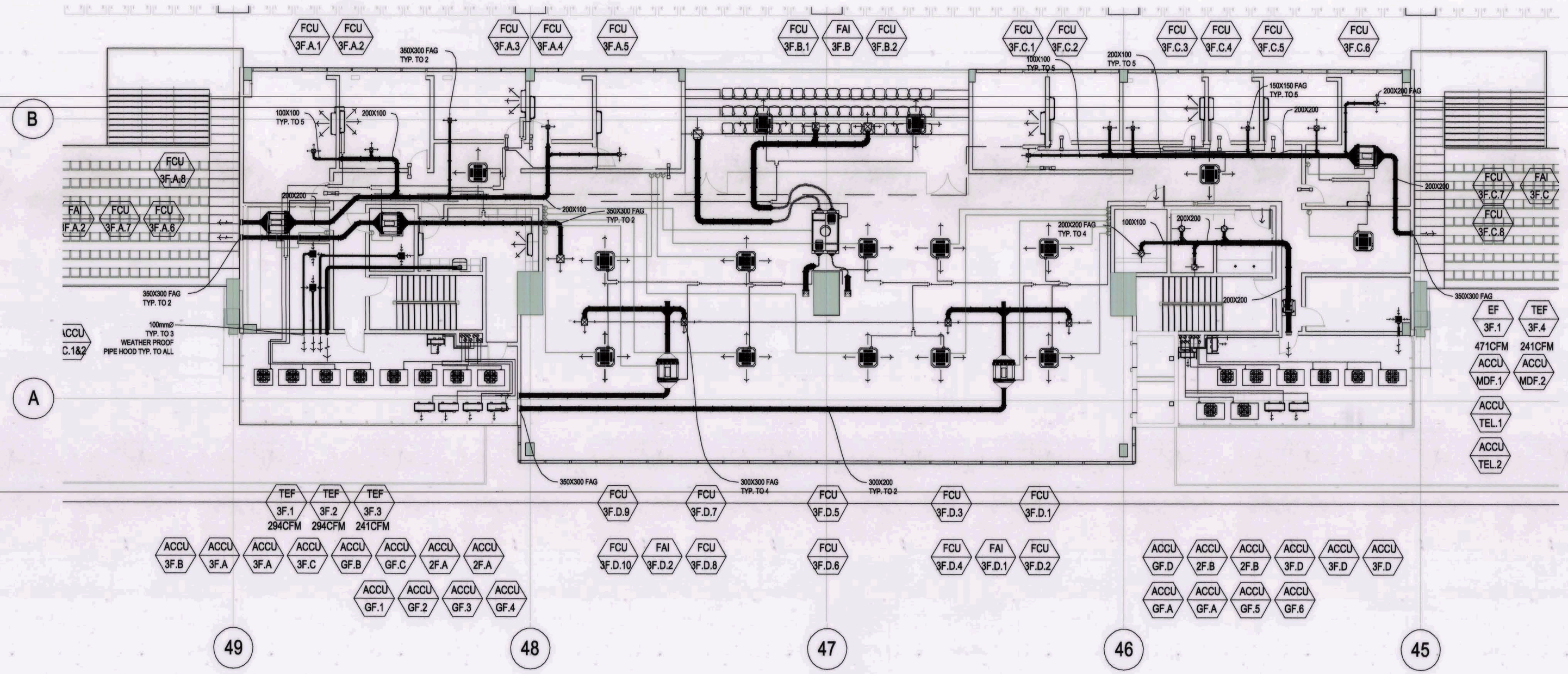

1 / M2-03 WEST STAND THIRD FLOOR AC / VENT LAY OUT
SCALE 1:100

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
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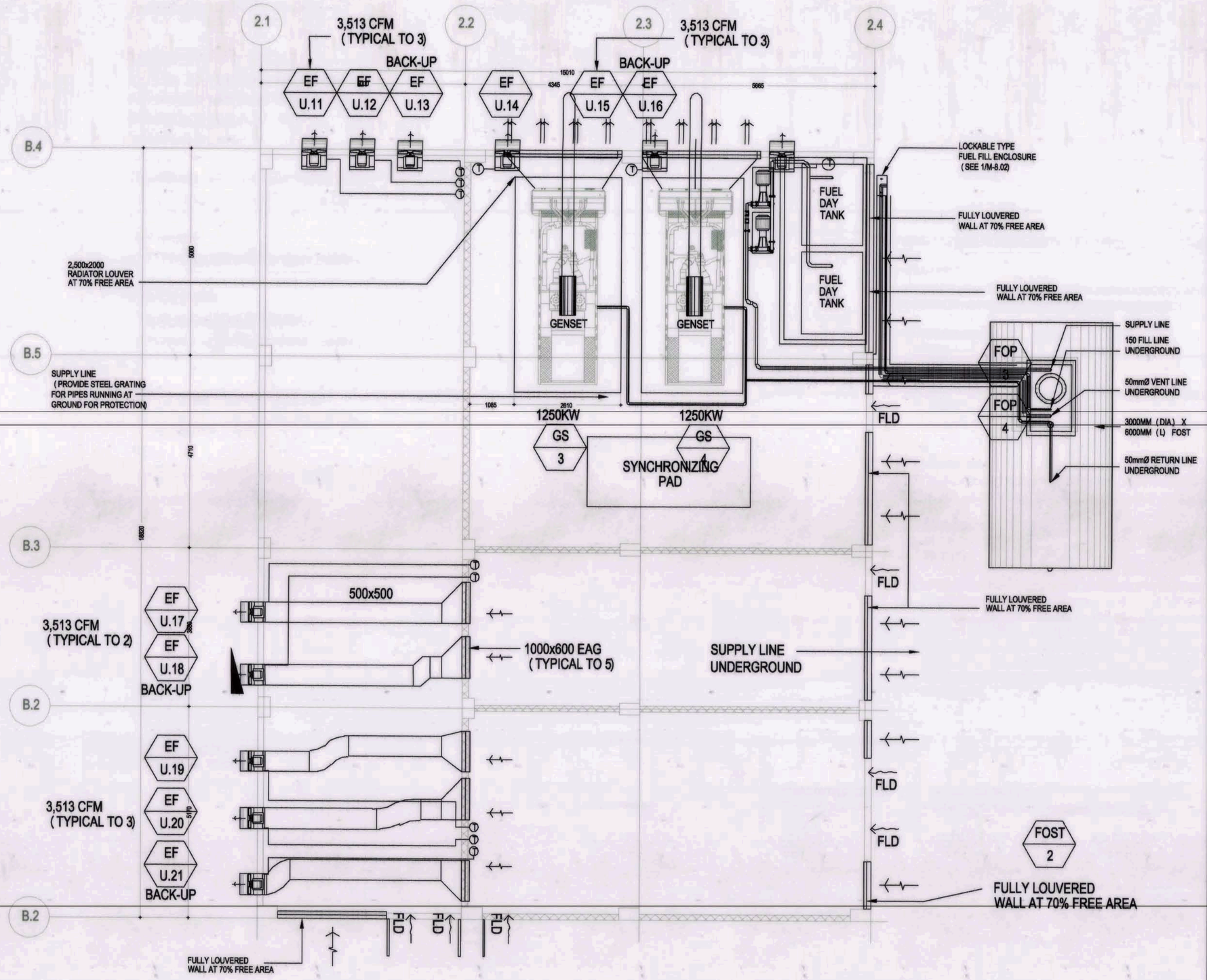
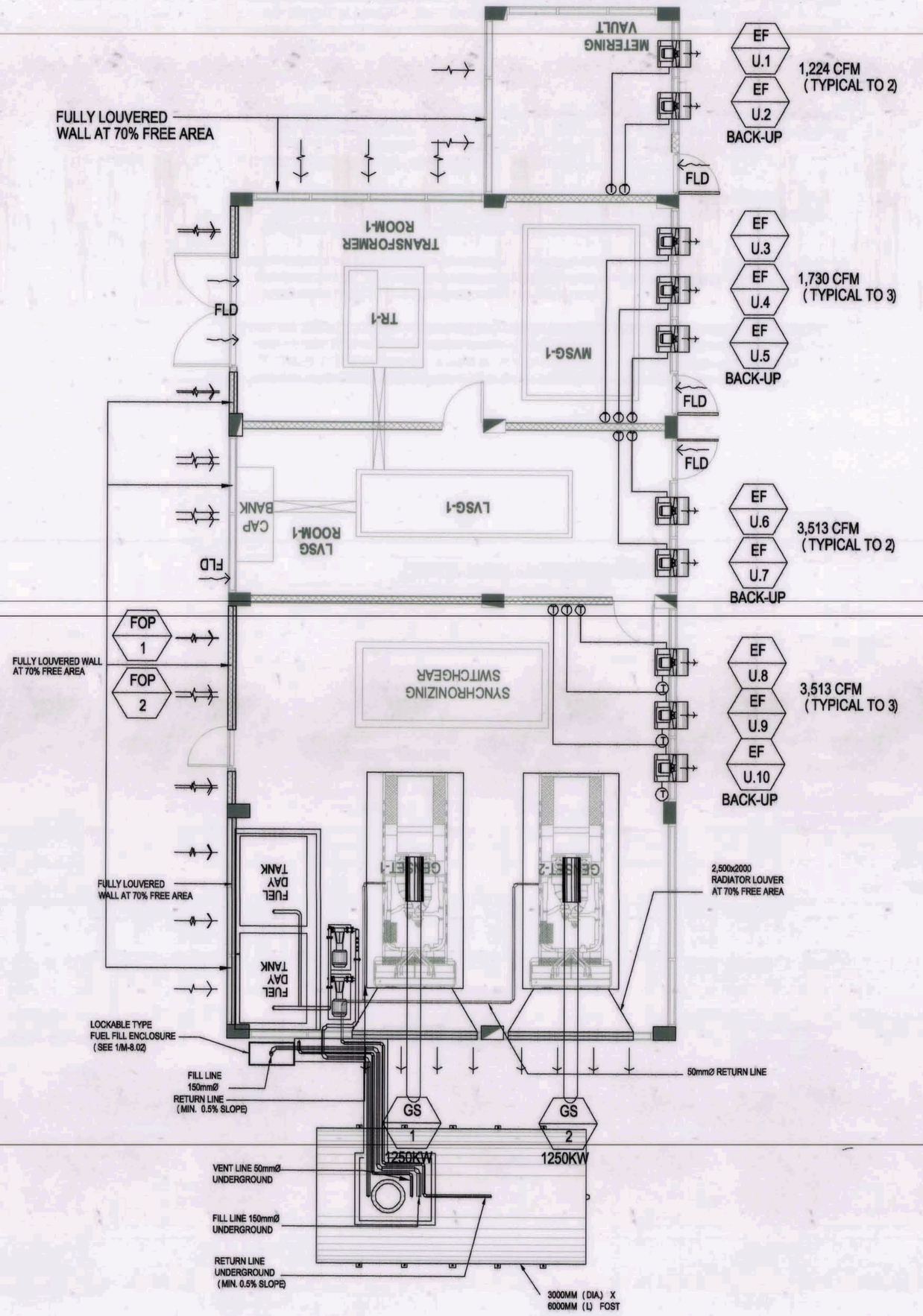


1 M3-01 **UTILITIES BUILDING VENTILATION & FUEL OIL PIPING LAYOUT (NORTH EAST)**
SCALE : 1:70



2 M3-01 **UTILITIES BUILDING VENTILATION & FUEL OIL PIPING LAYOUT (SOUTH WEST)**
SCALE : 1:70

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION — ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/COO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	UTILITIES BUILDING VENTILATION & FUEL OIL PIPING LAYOUT/SECTION (NORTH EAST/SOUTH WEST)	M3-01

DATA FOR FUEL OIL SYSTEM:

GENSET CAPACITY: 2 UNITS OF 1250KVA

FUEL CONSUMPTION PER GENSET: 271.6 $\frac{Li}{hr}$

FUEL OIL TANK RESERVED: 70 HOURS

FUEL OIL STORAGE TANK SIZING:

V = 271.6 x2$\frac{Li}{hr}$ GENSET x 72 HRS. = 38,024.0 Li

V = 38,024.0 Li (TOTAL FUEL CONSUMPTION)

V = 38,024.0 Li x 1.1 (10% AIR GAP)

V = 41,826.4 Li ≃ 42.0 M³

CONSIDERING 3.0M TANK DIAMETER FOR 1 TANK

V = $\frac{\pi}{4}$ D² X L ~ 42.0m³ = $\frac{\pi}{4}$ (3)² X L

SIZE OF TANK

1 UNIT OF 3.0MØ (DIAMETER) X 6.0M (LENGTH)

PUMP SELECTION:

REQUIRED VOLUME IN DAY TANK

V = 271.6 x2$\frac{Li}{hr}$ GENSET x 8 HRS. = 4,345.6 Li

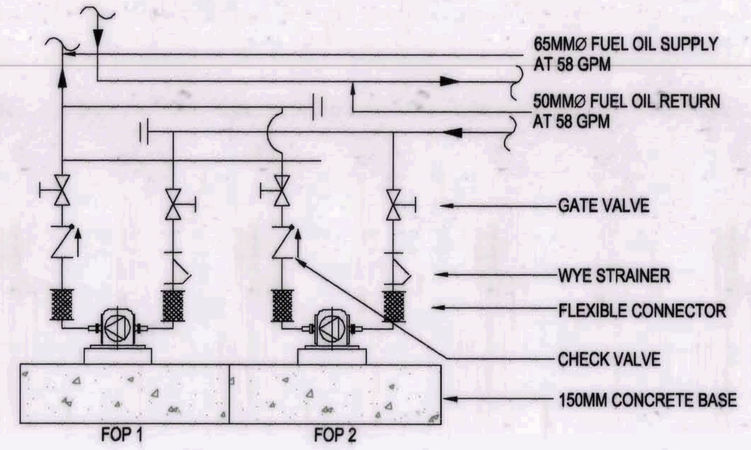
CONSIDERING 20 MINS. FILLING TIME

$\frac{4,345.6\ Li}{20\ MINUTES}$ x $\frac{1\ GAL}{3.78\ Li}$ = 57.48 GAL/MIN

SAY; 1 UNIT OF 58 GAL/MIN (OPERATION) &
1 UNIT OF 58 GAL/MIN (STAND-BY)

LEGEND:

- GATE VALVE
- WYE STRAINER
- FLEXIBLE CONNECTOR
- MOTORIZED BUTTERFLY VALVE
- FOOT VALVE
- CHECK VALVE
- FOP — FUEL OIL PUMP
- FOST — FUEL OIL STORAGE TANK



NOTES:

1.) IF THE FUEL LEVEL SENSORS AT THE FUEL OIL STORAGE TANKS SENSES THE FUEL LEVEL THAT IS AT "LOW LEVEL", FUEL OIL PUMPS WILL NOT RUN EVEN IF THE DAY TANKS ARE ALSO AT A "LOW FUEL LEVEL" ALARM. THIS IS TO PROTECT THE FUEL OIL PUMP FROM RUNNING WITHOUT ANY FUEL AT THE FUEL OIL STORAGE TANKS.

2.) FOP-1 AND FOP-2 SHALL BE OPERATE ALTERNATELY.

3.) THE FLOAT SWITCH HAS A ELECTRONIC SWITCH ACTUATED BY FUEL OIL LEVEL. DURING FILLING, WHEN THE DAY TANKS REACHES THE MAXIMUM SETTING OF FUEL OIL LEVEL, THE ELECTRONIC SWITCH ACTIVATE THE VALVE TO CLOSE AUTOMATICALLY. ONCE THE FUEL OIL DROPS TO MINIMUM LEVEL, THE ELECTRONIC SWITCH WILL ACTIVATE THE VALVE TO OPEN.

4.) THE MOTORIZED BUTTERFLY VALVE WILL SERVE AS A BACK UP VALVE INCASE FLAOT SWITCH FAILS. THE VALVE HAS A FUEL OIL LEVEL SENSORS WHICH WILL ACTIVATE THE VALVE TO CLOSE OR OPEN WHEN MAXIMUM OR MINIMUM FUEL OIL LEVEL SETTING HAVE REACH RESPECTIVELY.

5.) WHEN PRESSURE IN THE MAIN HEADER REACHES THE MAX SETTING, THE PUMP WILL AUTOMATICALLY SWITCH OFF. THE PUMP WILL SWITCH ON WHEN PRESSURE DROPS TO THE MINIMUM SETTING, BUT AFTER A TIME DELAY TO PROTECT THE MOTOR AND STARTER.

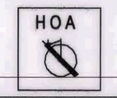
6.) THE MOTORIZED BUTTERFLY VALVE AND TELL TALE METER IS ACTUATED BY HIGH AND LOW SENSORS IN THE FUEL OIL STORAGE TANK. DURING FILLING, WHEN IT REACHES THE MAXIMUM OR MINIMUM LEVEL, THE MOTORIZED BUTTERFLY VALVE CLOSES OR OPEN RESPECTIVELY. WHILE THE TALE TELL METER WILL INFORM THE PERSON FILLING THE TANK THE LEVEL OF FUEL WHEN ITS FULL OR LOW.

AUTOMATIC / MANUAL SEQUENCE FOR FUEL OIL FILLING AND PUMP OPERATION:

A. MANUAL MODE

1.) IN THE "MANUAL MODE" EACH PUMP CAN BE STARTED OR STOPPED MANUALLY VIA "H/O/A" CONTROLLER/SELECTOR SWITCH.

H - HAND/MANUAL
O - OFF
A - AUTOMATIC



SEQENCE: 1.1) SET SELECTOR SWITCH TO "H" POSITION FOR MANUAL MODE.
1.2) SELECT EITHER FOP-1 OR FOP-2.
1.3) PRESS THE START/STOP BUTTON TO RUN/STOP THE PUMP.

B. AUTOMATIC MODE

1.) IN THE "AUTOMATIC MODE" EACH PUMP SHALL START ALTERNATELY BASED ON FUEL LEVEL AT BOTH FUEL OIL DAY TANKS AND BULK FUEL STORAGE TANKS.

H - HAND/MANUAL
O - OFF
A - AUTOMATIC

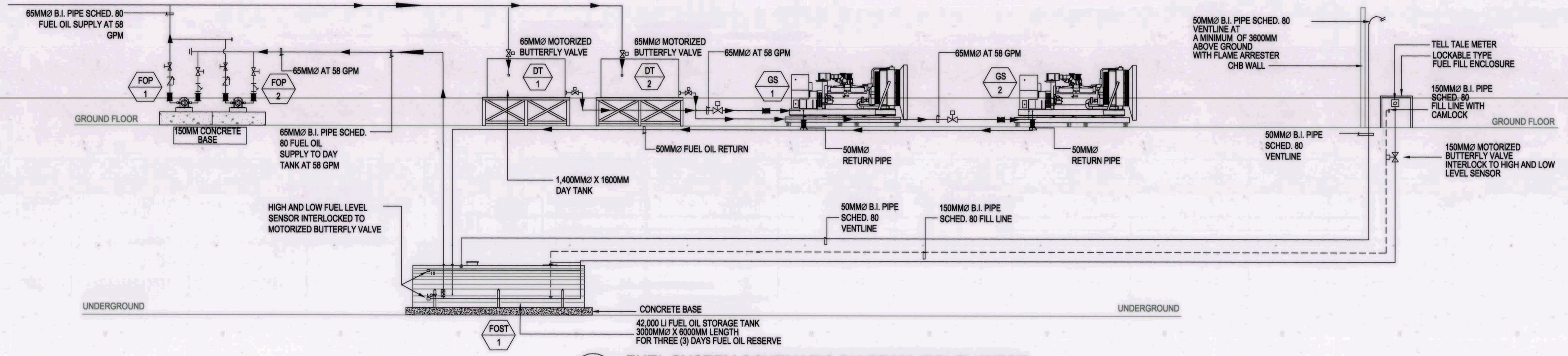
SEQENCE: 1.1) SET SELECTOR SWITCH TO "A" POSITION FOR AUTOMATIC MODE.
1.2) ONCE THE FUEL DAY TANKS REACHES THE PRESET MINIMUM FUEL LEVEL, FOP-1 & 2 WILL RUN DEPENDING ON THE LEAD-LAG SETTING. ONCE THE FUEL DAY TANK REACHES THE PRESET MAXIMUM FUEL LEVEL, THE PUMP WILL STOP OPERATION.
1.4) PUMPS WILL RUN/STOP ALTERNATELY AS THE FUEL LEVEL IN THE FUEL DAY TANK REACHES THE MINIMUM AND MAXIMUM LEVELS.

FUEL OIL STORAGE TANK (FOST)

UNIT DESIGNATION	QUANTITY	TANK SIZE (LITERS)	DIAMETER (MM)	LENGTH (MM)	FILLING (MM)	RETURN PIPE SIZE (MM)	SUCTION PIPE SIZE (MM)	REMARKS
FOST - 1	1	42,000	3000	6000	150	50	65	MADE OF 6.5MM THICK B.1 STEEL PLATE

FUEL OIL PUMP (FOP)

UNIT DESIGNATION	QUANTITY	CAPACITY (GPM)	PRESSURE (PSI)	POWER RATING (HP)	ELECTRICAL DATA	DIAMETER (MM)	LENGTH (MM)	REMARKS
FOP - 1 & 2	2	58	100	5	400V/3P/60Hz	241	535	POSITIVE-DISPLACEMENT ROTARY GEAR PUMP



FUEL SYSTEM SCHEMATIC DIAGRAM (SOUTH WEST)

SCALE: NTS

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P.DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	FUEL SYSTEM SCHEMATIC DIAGRAM (SOUTH WEST)	M4-01

DATA FOR FUEL OIL SYSTEM:

GENSET CAPACITY: 2 UNITS OF 1250KVA

FUEL CONSUMPTION PER GENSET: 271.6 $\frac{Li}{hr}$

FUEL OIL TANK RESERVED: 70 HOURS

FUEL OIL STORAGE TANK SIZING:

V = 271.6 x 2 $\frac{Li}{hr}$ GENSET x 70 HRS. = 38.024.0 Li

V = 38,024.0 Li (TOTAL FUEL CONSUMPTION)

V = 38,024.0 Li x 1.1 (10% AIR GAP)

V = 41,826.4 Li ≃ 42.0 M³

CONSIDERING 3.0M TANK DIAMETER FOR 1 TANK

V = $\frac{\pi}{4}$ D² X L ~ 42.0m³ = $\frac{\pi}{4}$ (3)² X L

SIZE OF TANK

1 UNIT OF 3.0MØ (DIAMETER) X 6.0M (LENGTH)

PUMP SELECTION:

REQUIRED VOLUME IN DAY TANK

V = 271.6 x 2 $\frac{Li}{hr}$ GENSET x 8 HRS. = 4,345.6 Li

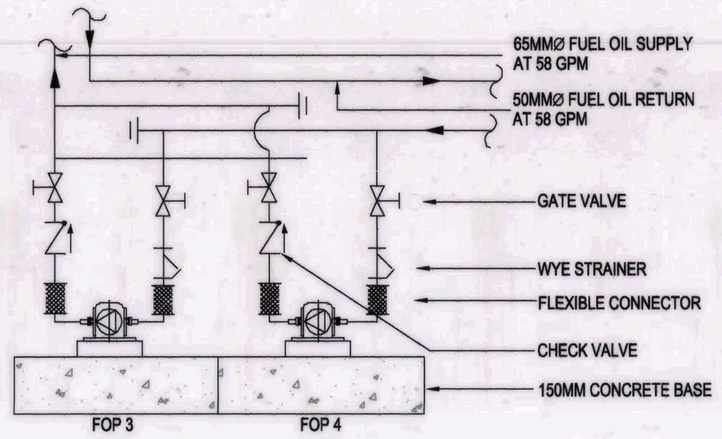
CONSIDERING 20 MINS. FILLING TIME

$\frac{4,345.6\ Li}{20\ MINUTES}$ x $\frac{1\ GAL}{3.78\ Li}$ = 57.48 GAL/MIN

SAY; 1 UNIT OF 58 GAL/MIN (OPERATION) &
1 UNIT OF 58 GAL/MIN (STAND-BY)

LEGEND:

- GATE VALVE
- WYE STRAINER
- FLEXIBLE CONNECTOR
- MOTORIZED BUTTERFLY VALVE
- FOOT VALVE
- CHECK VALVE
- FOP — FUEL OIL PUMP
- FOST — FUEL OIL STORAGE TANK

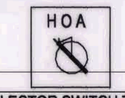


AUTOMATIC / MANUAL SEQUENCE FOR FUEL OIL FILLING AND PUMP OPERATION:

A. MANUAL MODE

1.) IN THE "MANUAL MODE" EACH PUMP CAN BE STARTED OR STOPPED MANUALLY VIA "H/O/A" CONTROLLER/SELECTOR SWITCH.

H - HAND/MANUAL
O - OFF
A - AUTOMATIC

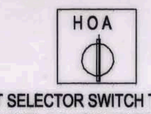


SEQENCE: 1.1) SET SELECTOR SWITCH TO "H" POSITION FOR MANUAL MODE.
1.2) SELECT EITHER FOP-1 OR FOP-2.
1.3) PRESS THE START/STOP BUTTON TO RUN/STOP THE PUMP.

B. AUTOMATIC MODE

1.) IN THE "AUTOMATIC MODE" EACH PUMP SHALL START ALTERNATELY BASED ON FUEL LEVEL AT BOTH FUEL OIL DAY TANKS AND BULK FUEL STORAGE TANKS.

H - HAND/MANUAL
O - OFF
A - AUTOMATIC



SEQENCE: 1.1) SET SELECTOR SWITCH TO "A" POSITION FOR AUTOMATIC MODE.
1.2) ONCE THE FUEL DAY TANKS REACHES THE PRESET MINIMUM FUEL LEVEL, FOP-1 & 2 WILL RUN DEPENDING ON THE LEAD-LAG SETTING. ONCE THE FUEL DAY TANK REACHES THE PRESET MAXIMUM FUEL LEVEL, THE PUMP WILL STOP OPERATION.
1.4) PUMPS WILL RUN/STOP ALTERNATELY AS THE FUEL LEVEL IN THE FUEL DAY TANK REACHES THE MINIMUM AND MAXIMUM LEVELS.

NOTES:

1.) IF THE FUEL LEVEL SENSORS AT THE FUEL OIL STORAGE TANKS SENSES THE FUEL LEVEL THAT IS AT "LOW LEVEL", FUEL OIL PUMPS WILL NOT RUN EVEN IF THE DAY TANKS ARE ALSO AT A "LOW FUEL LEVEL" ALARM. THIS IS TO PROTECT THE FUEL OIL PUMP FROM RUNNING WITHOUT ANY FUEL AT THE FUEL OIL STORAGE TANKS.

2.) FOP-1 AND FOP-2 SHALL BE OPERATE ALTERNATELY.

3.) THE FLOAT SWITCH HAS A ELECTRONIC SWITCH ACTUATED BY FUEL OIL LEVEL. DURING FILLING, WHEN THE DAY TANKS REACHES THE MAXIMUM SETTING OF FUEL OIL LEVEL, THE ELECTRONIC SWITCH ACTIVATE THE VALVE TO CLOSE AUTOMATICALLY. ONCE THE FUEL OIL DROPS TO MINIMUM LEVEL, THE ELECTRONIC SWITCH WILL ACTIVATE THE VALVE TO OPEN.

4.) THE MOTORIZED BUTTERFLY VALVE WILL SERVE AS A BACK UP VALVE INCASE FLOAT SWITCH FAILS. THE VALVE HAS A FUEL OIL LEVEL SENSORS WHICH WILL ACTIVATE THE VALVE TO CLOSE OR OPEN WHEN MAXIMUM OR MINIMUM FUEL OIL LEVEL SETTING HAVE REACH RESPECTIVELY.

5.) WHEN PRESSURE IN THE MAIN HEADER REACHES THE MAX SETTING, THE PUMP WILL AUTOMATICALLY SWITCH OFF. THE PUMP WILL SWITCH ON WHEN PRESSURE DROPS TO THE MINIMUM SETTING, BUT AFTER A TIME DELAY TO PROTECT THE MOTOR AND STARTER.

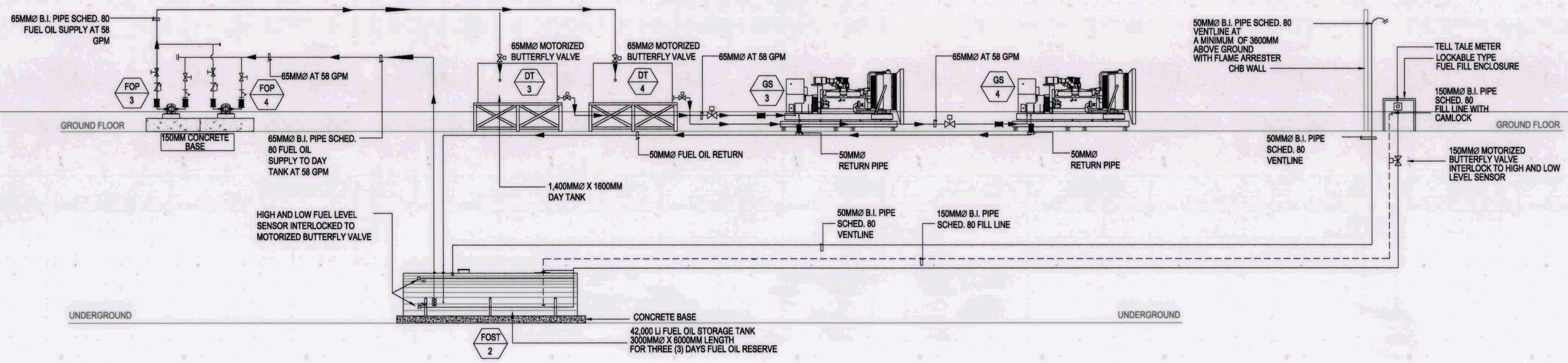
6.) THE MOTORIZED BUTTERFLY VALVE AND TELL TALE METER IS ACTUATED BY HIGH AND LOW SENSORS IN THE FUEL OIL STORAGE TANK. DURING FILLING, WHEN IT REACHES THE MAXIMUM OR MINIMUM LEVEL, THE MOTORIZED BUTTERFLY VALVE CLOSES OR OPEN RESPECTIVELY. WHILE THE TALE TELL METER WILL INFORM THE PERSON FILLING THE TANK THE LEVEL OF FUEL WHEN ITS FULL OR LOW.

FUEL OIL STORAGE TANK (FOST)

UNIT DESIGNATION	QUANTITY	TANK SIZE (LITERS)	DIAMETER (MM)	LENGTH (MM)	FILLING (MM)	RETURN PIPE SIZE (MM)	SUCTION PIPE SIZE (MM)	REMARKS
FOST - 2	1	42,000	3000	6000	150	50	65	MADE OF 6.5MM THICK B.1 STEEL PLATE

FUEL OIL PUMP (FOP)

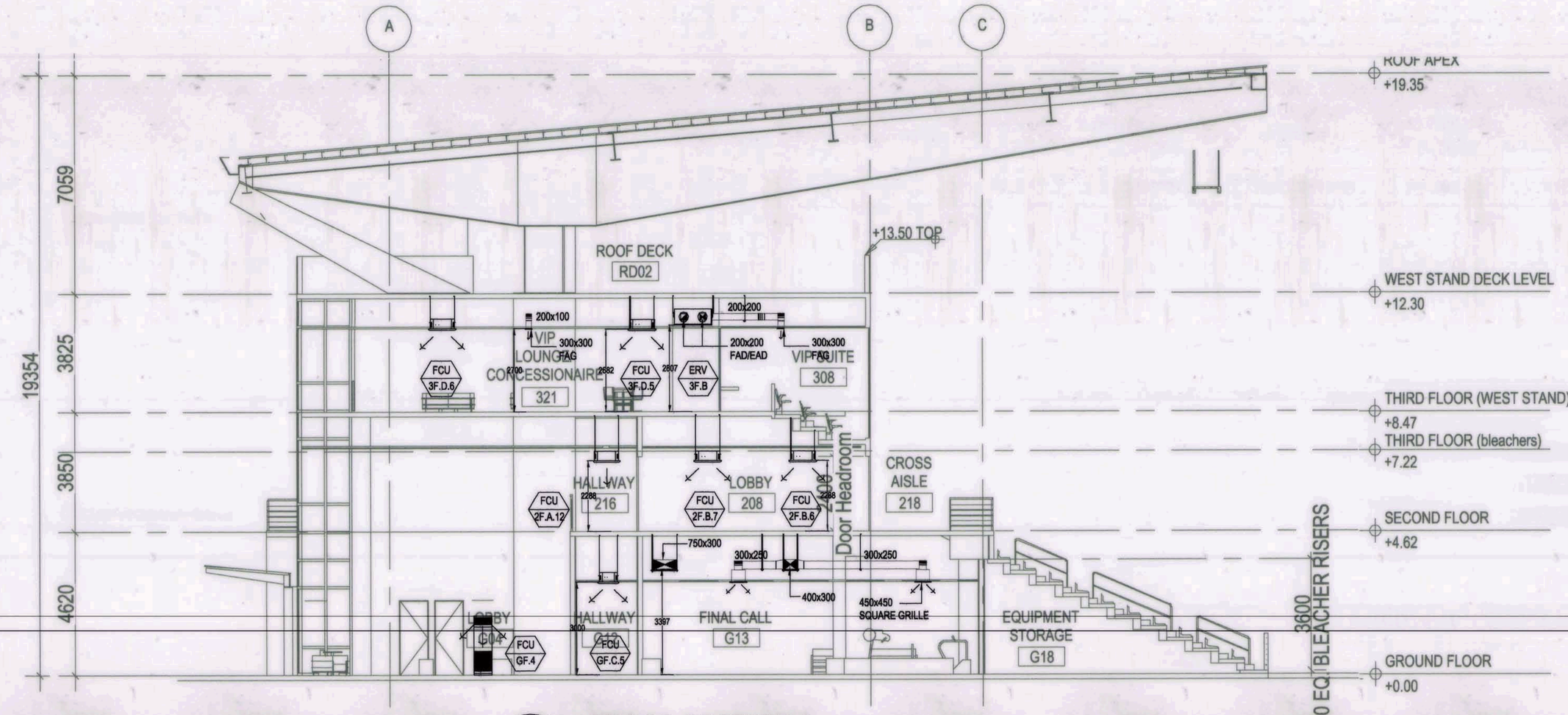
UNIT DESIGNATION	QUANTITY	CAPACITY (GPM)	PRESSURE (PSI)	POWER RATING (HP)	ELECTRICAL DATA	DIAMETER (MM)	LENGTH (MM)	REMARKS
FOP - 3 & 4	2	58	100	5	400V/3P/60Hz	241	535	POSITIVE-DISPLACEMENT ROTARY GEAR PUMP



FUEL SYSTEM SCHEMATIC DIAGRAM (NORTH EAST)

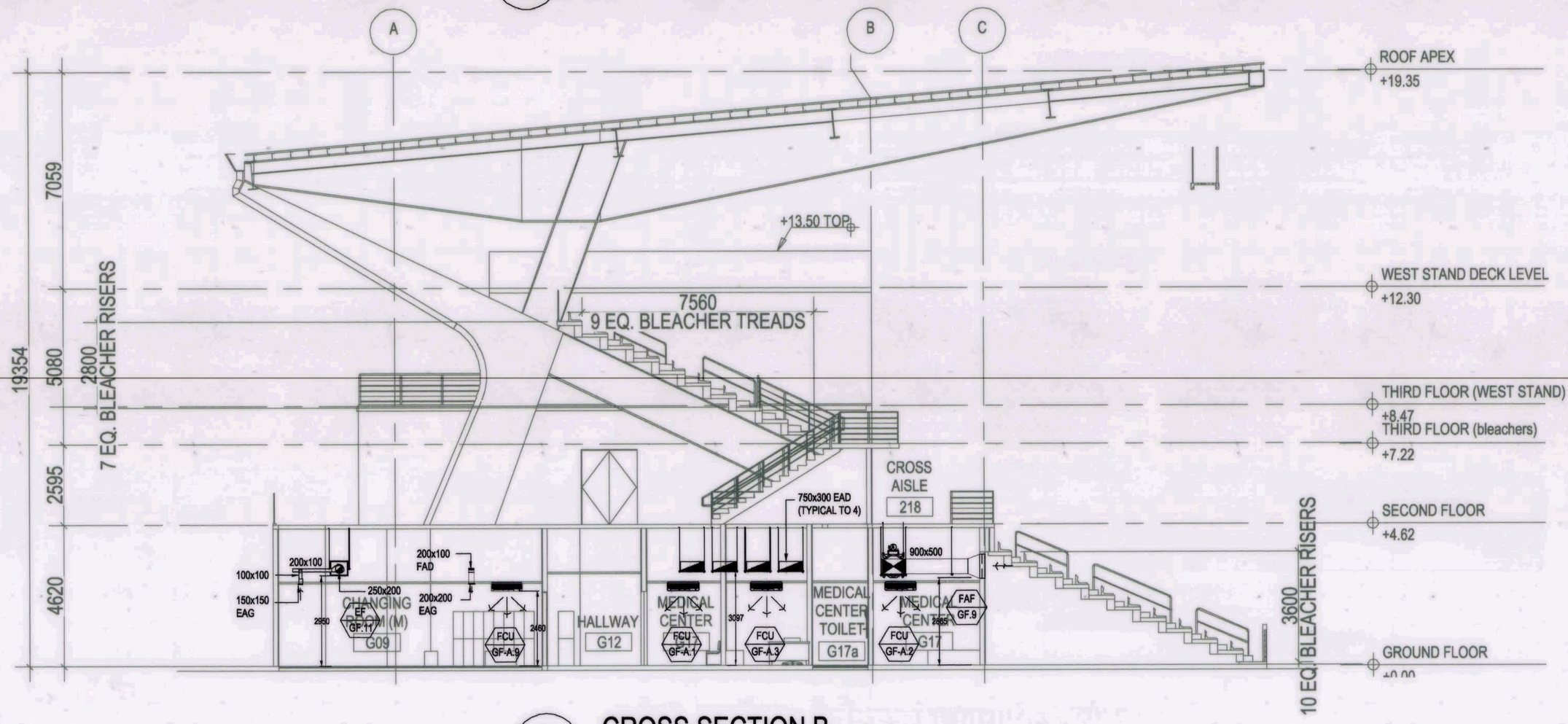
SCALE : NTS

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS F. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1635 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL. #(02)654-4152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 6th Floor Aurora Milestone Bldg., 1045 Aurora Blvd, Quezon City Philippines 111 Tel. (632) 421-2871 to 74 Fax: (632) 421-2431 Email : fildravo@mlto.com.ph Website: www.fildravo.com ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS 8th Flr. Felize Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	FUEL SYSTEM SCHEMATIC DIAGRAM (NORTH EAST)	M4-02



1 / M5-01 **CROSS SECTION A**

SCALE 1:100



2 / M5-01 **CROSS SECTION B**

SCALE 1:100

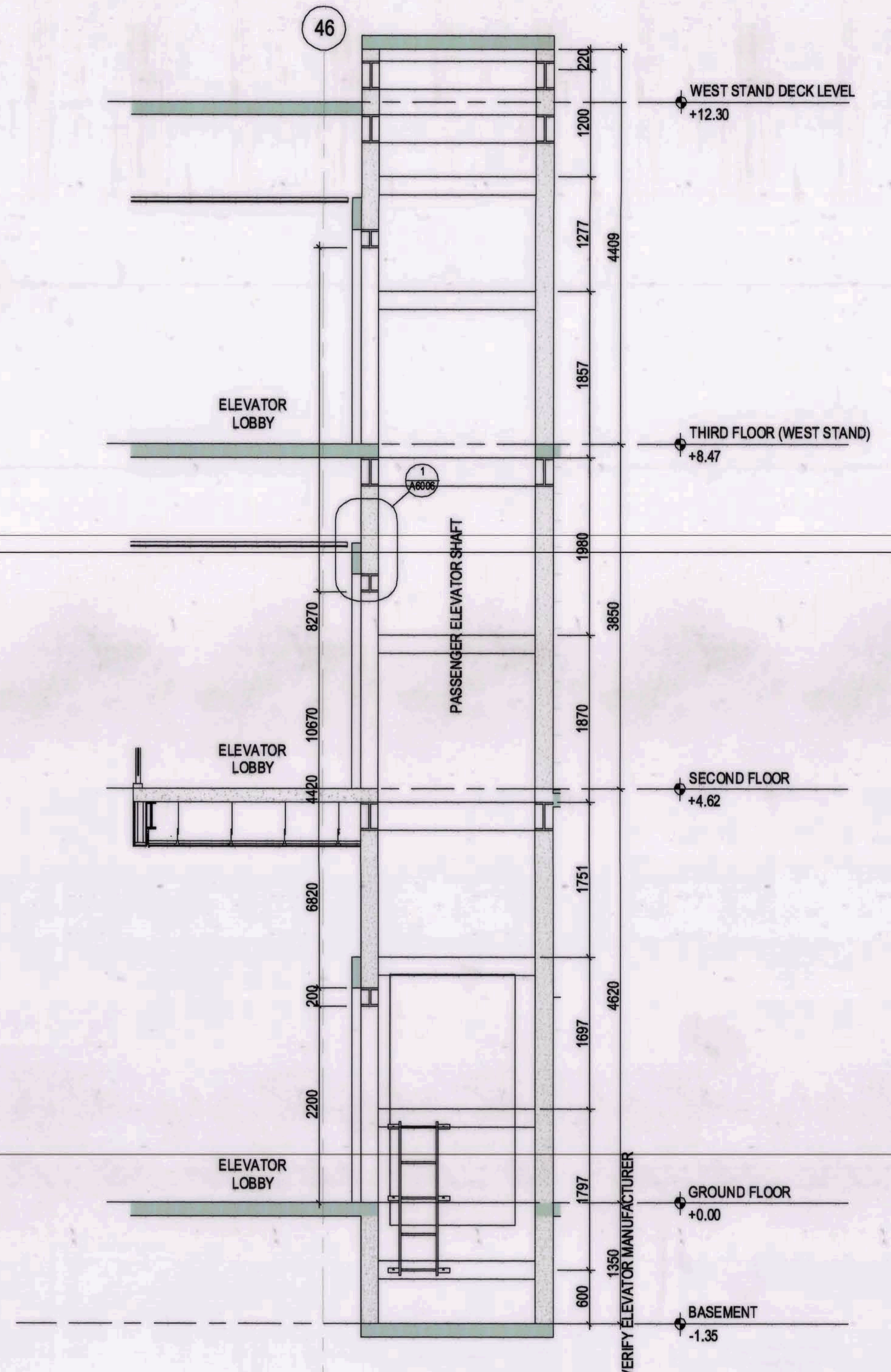
OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1888 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL. #(02)654-1152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	CROSS SECTION	M5-01

ELEVATOR BRANDS TABULATION

BRAND	RATED CAPACITY (KG)	MAX. NO. OF PERSONS	NO. OF STOPS	RATED SPEED (M/S)	DOOR OP WIDTH (MM)	CAR INTERNAL SIZE (MM)	HOISTWAY (MM)	OVERHEAD HEIGHT (MM)	MINIMUM PIT DEPTH (MM)
IFE	800	10	3	1	800	1200X1400	1981X1926	4409	1350

ELEVATOR ELECTRICAL DATA

MOTOR CAPACITY (KW)	SUPPLY VOLTAGE (V)	BREAKER CAPACITY (A)
5.3	400V,3PH	125



ELEVATOR SECTION

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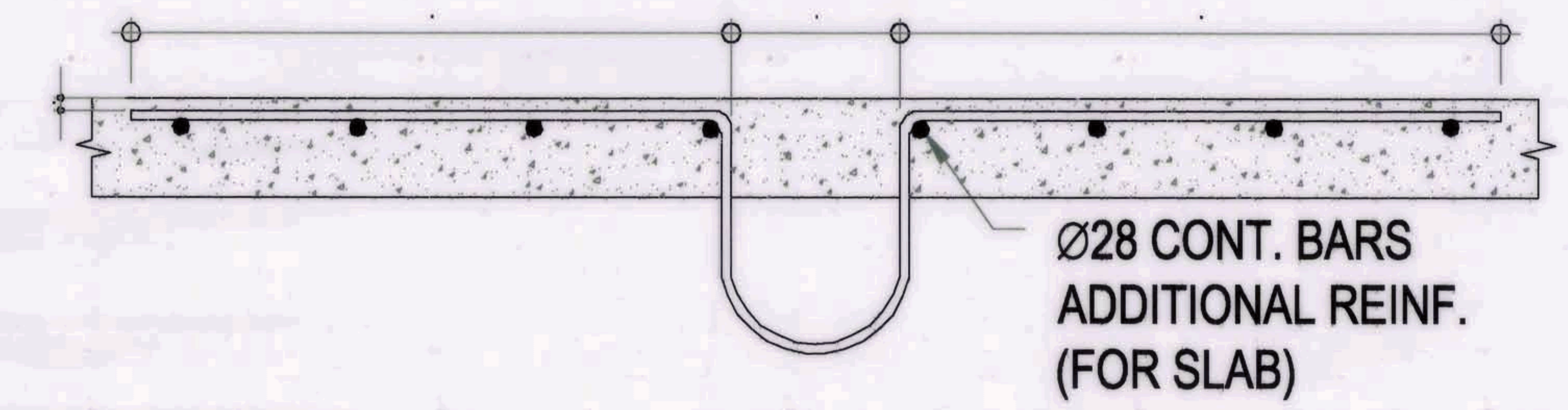
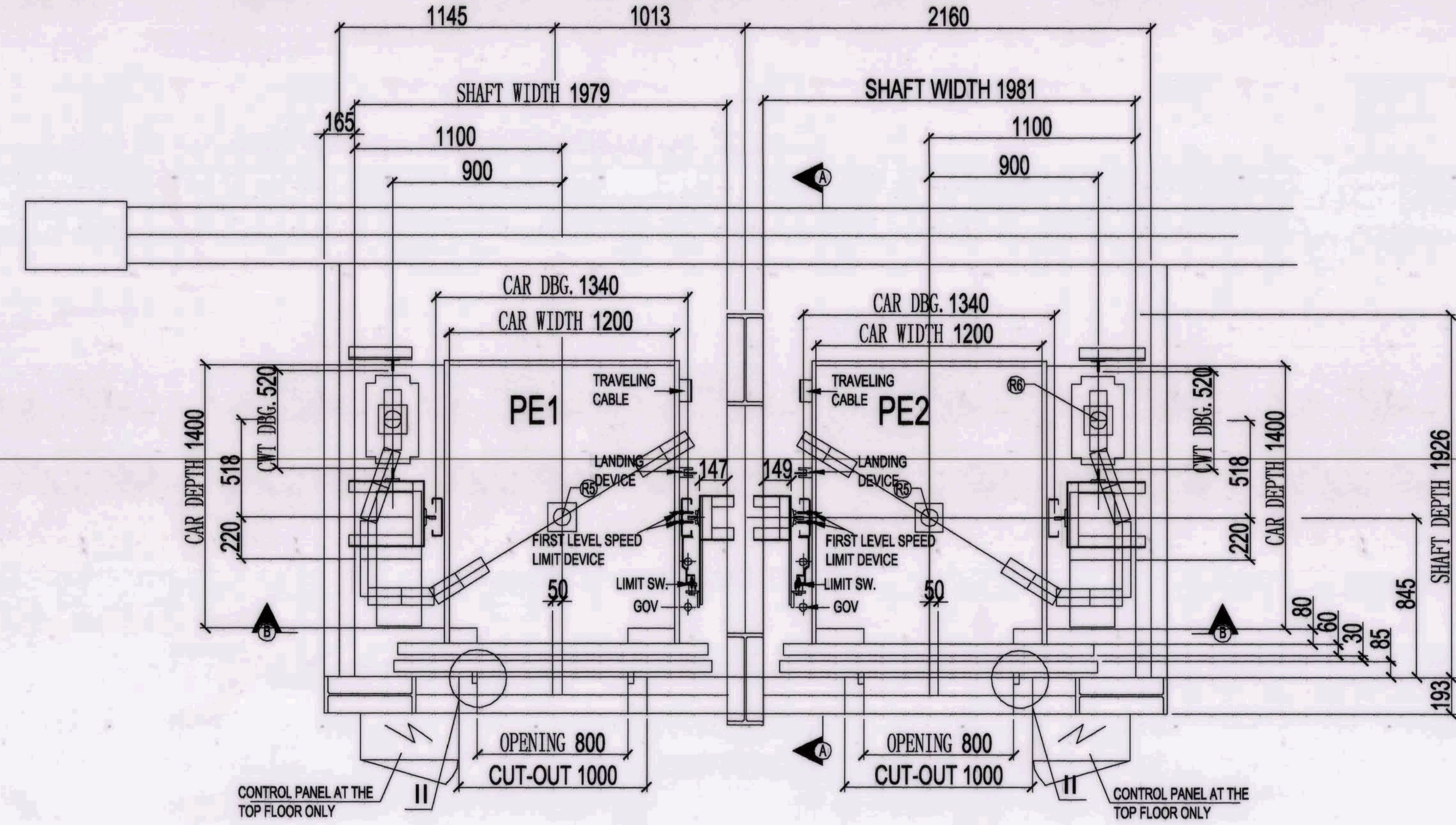


TYPICAL HOISTING HOOKS DETAIL

SCALE: 1:20

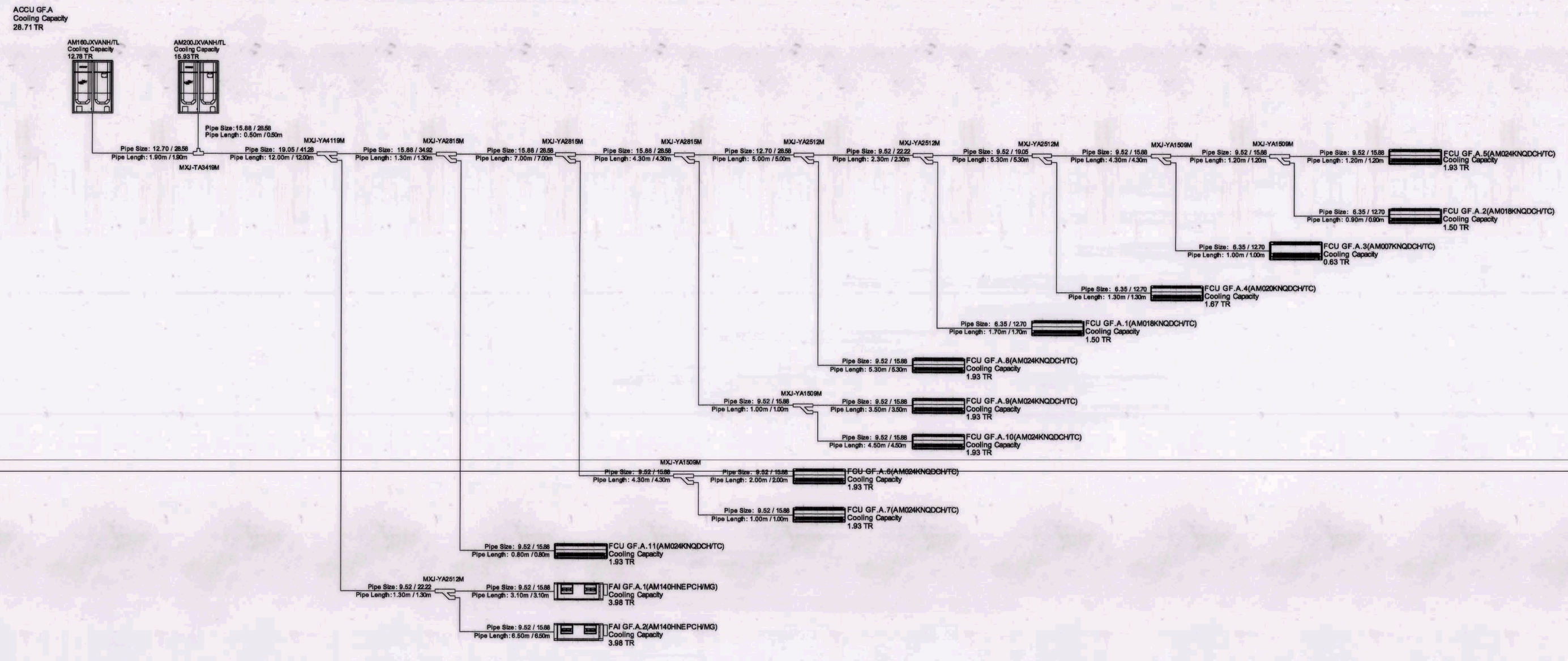
SHAFT PLAN



ELEVATOR LAY-OUT

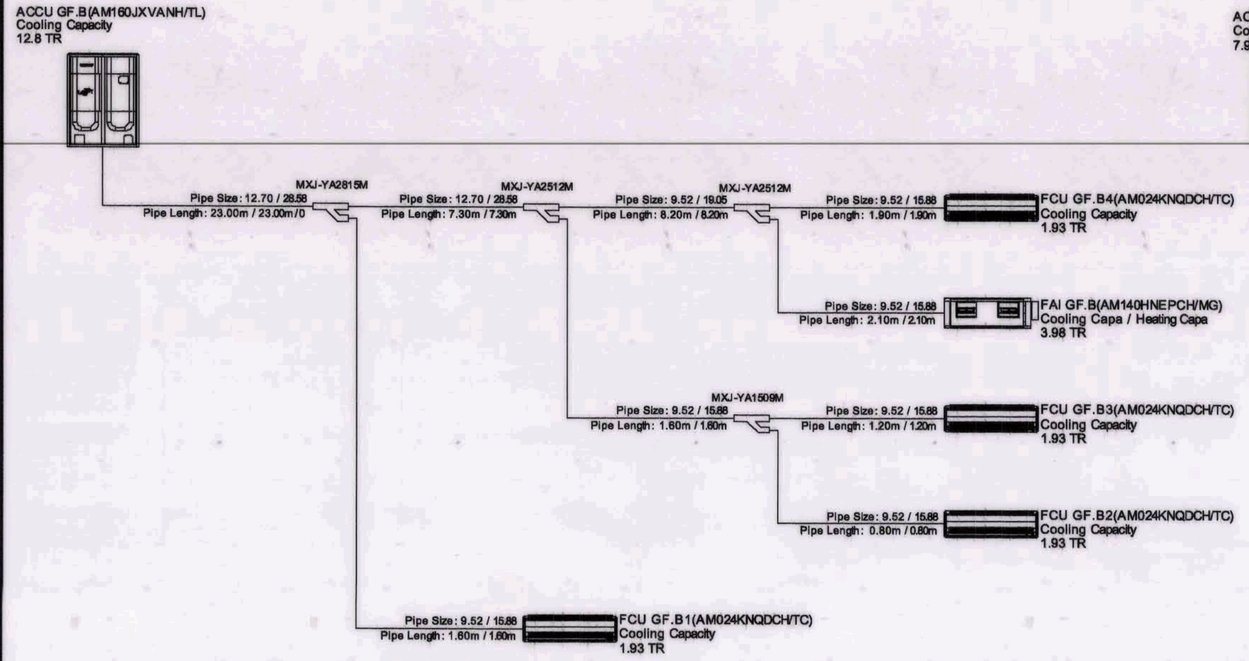
SCALE: 1:20

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT; PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION; ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants; ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC.; ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS; VIRGILIO A. MADRAZO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (ARCHITECTURAL) NEW CLARK CITY, CAPAS TARLAC	ELEVATOR LAYOUT AND SECTION	M6-01



1 M7-01 GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-GF.A)

SCALE: NTS



2 M7-01 GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-GF.B)

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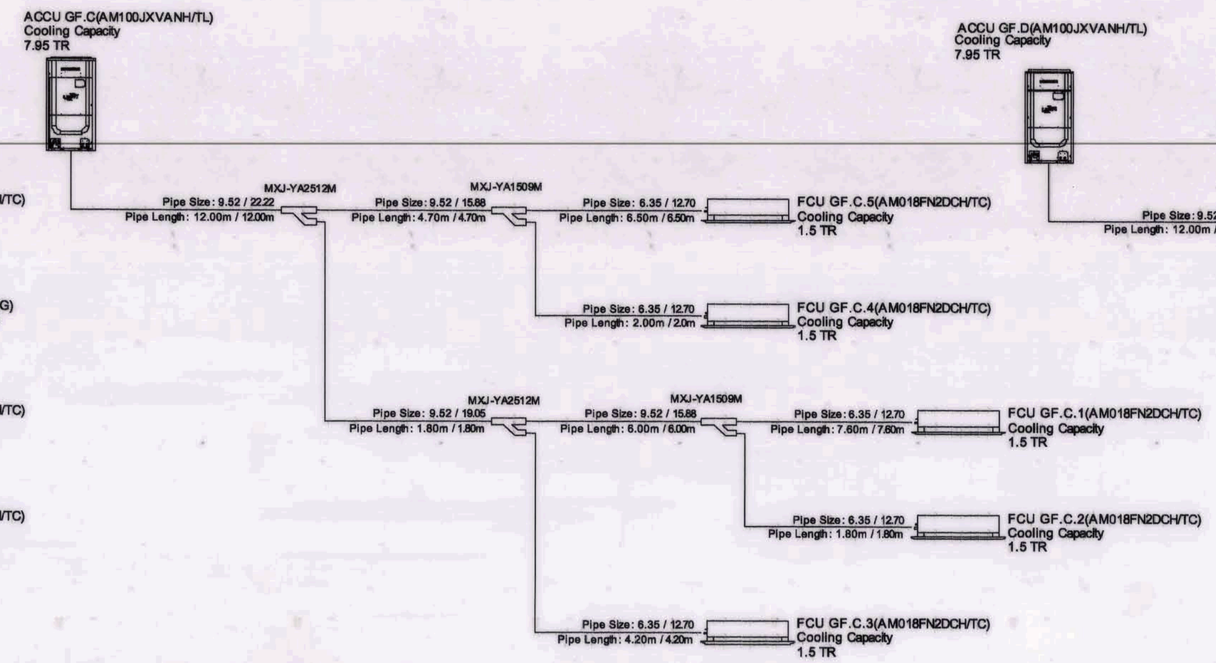

3 M7-01 GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-GF.C)

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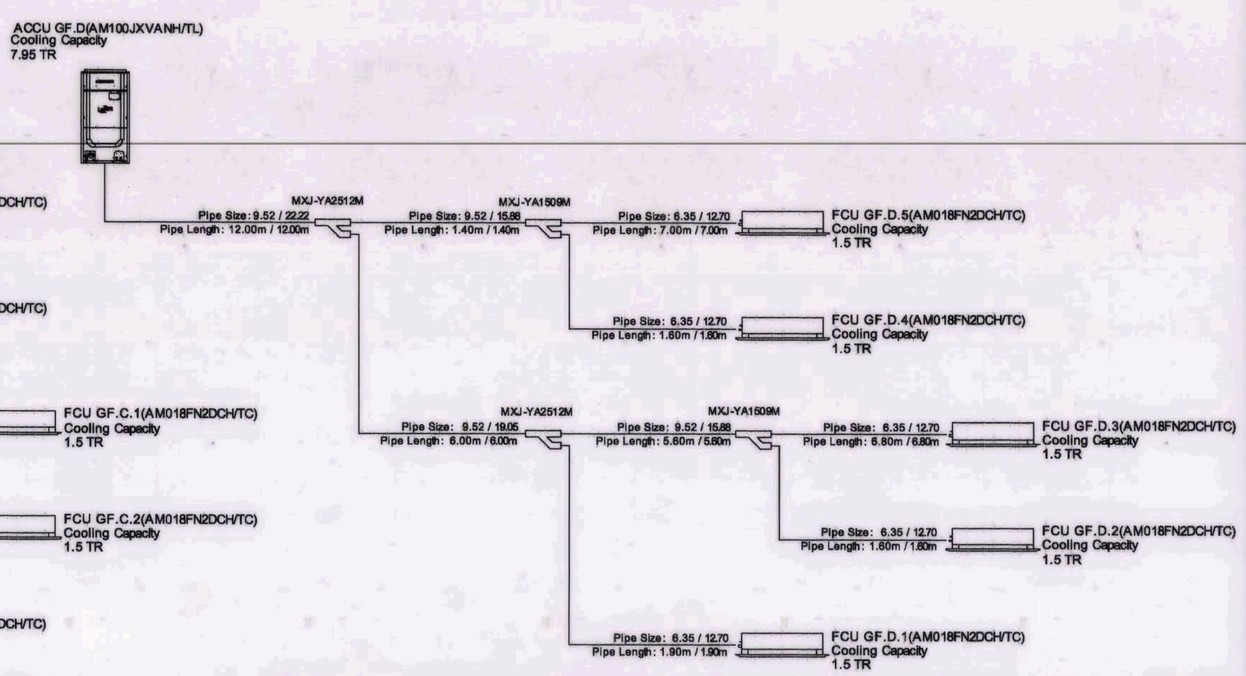

4 M7-01 GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-GF.D)

SCALE: NTS

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BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON PRESIDENT AND MTD Clark, Inc. PATRICK NICHOLAS P.DAVID PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1835 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL #(02)654-4152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 8th Floor Aurora Metropolitan Bldg., 1040 Aurora Blvd., Quezon City Philippines 1113 Tel. (632) 421-2971 to 74 Fax. (632) 421-2437 Email : fildravo@pldt.com.ph Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS 6th Flr. Felcor Bldg., 139 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-GF.A/ACCU-GF.B/ ACCU-GF.C/ACCU-GF.D)	M7-01

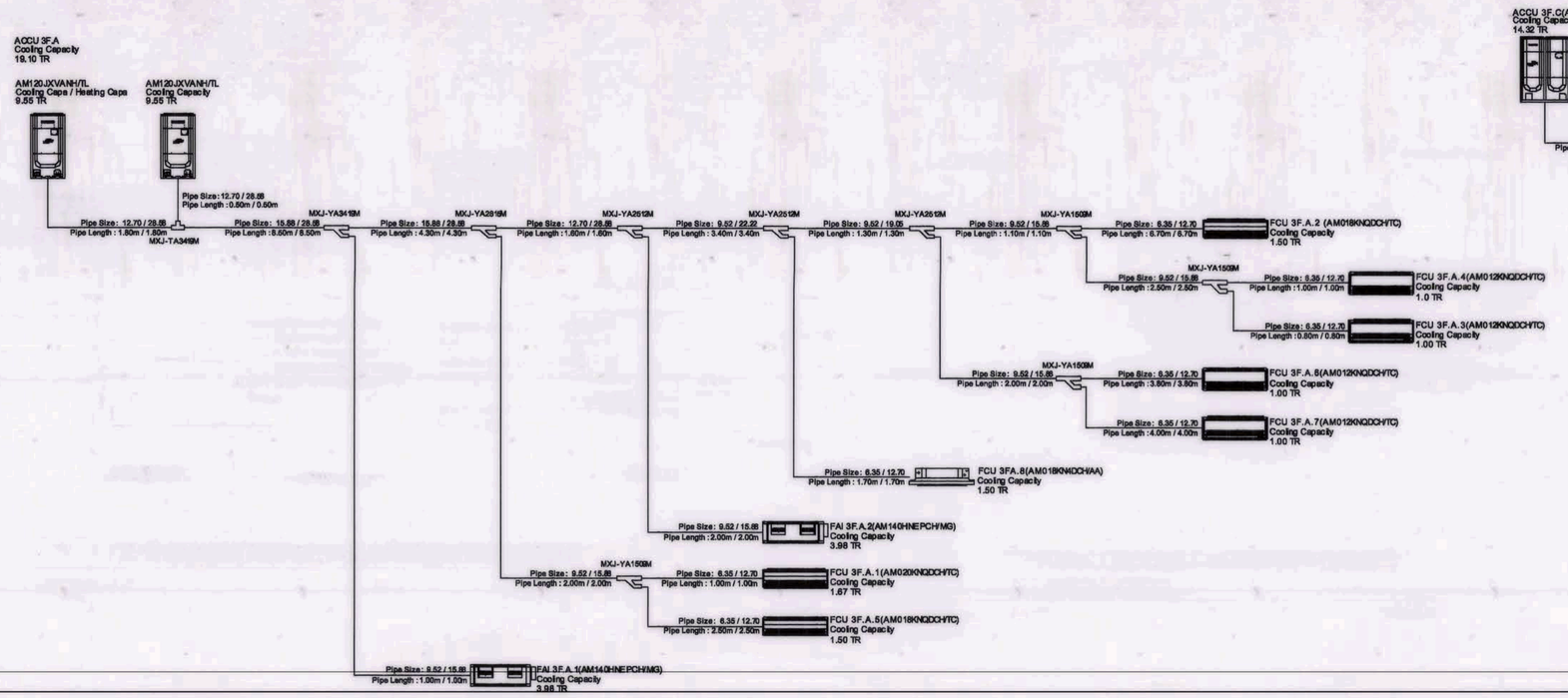
1 M7-02 SCALE: NTS

SECOND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-2F.A)

2 M7-02 SCALE: NTS

SECOND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-2F.B)

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P.DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1855 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL #(02)8654-1152 to 55 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg., 1049 Aurora Blvd., Quezon City Philippines 111 Tel. (632) 421-2951 to 74 Fax. (632) 421-2431 Email: fildravo@pldt.com.ph Website: www.fildravo.com ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS 8th Flr. Felbo Bldg., 139 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8170711 to 19 VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	SECOND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-2F.A/ACCU-2F.B)	M7-02



1 / M7-03 THIRD FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-3F.A)

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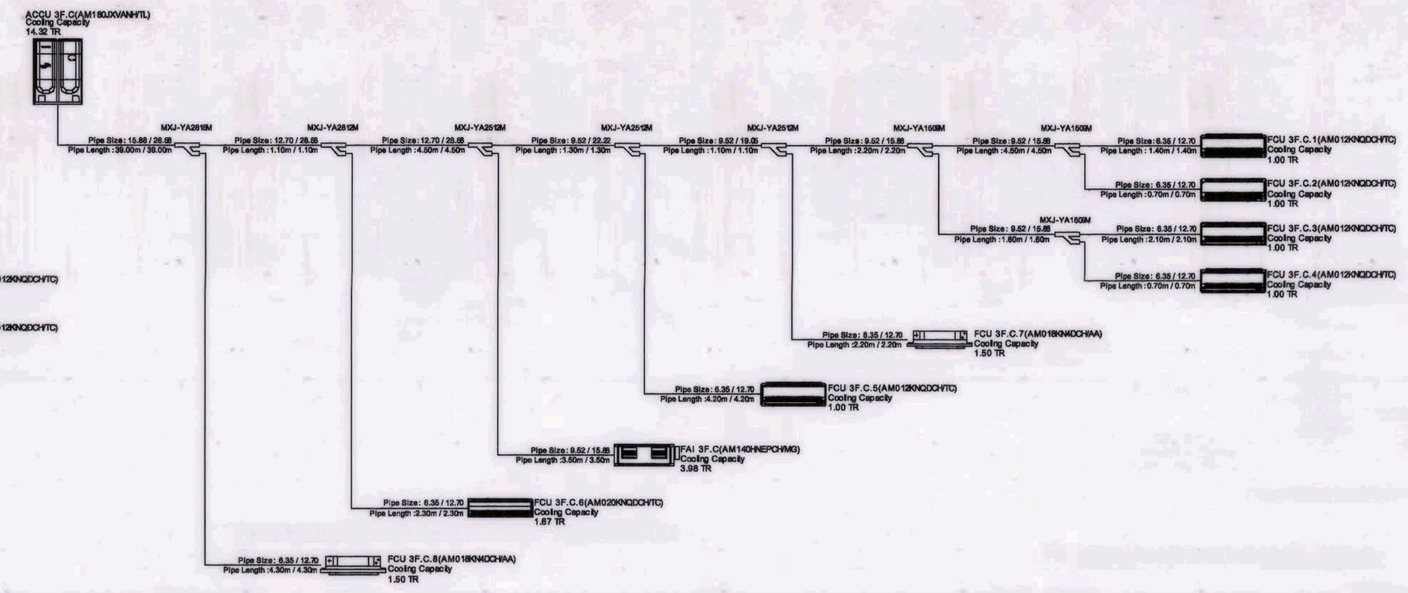

3 / M7-03 THIRD FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-3F.C)

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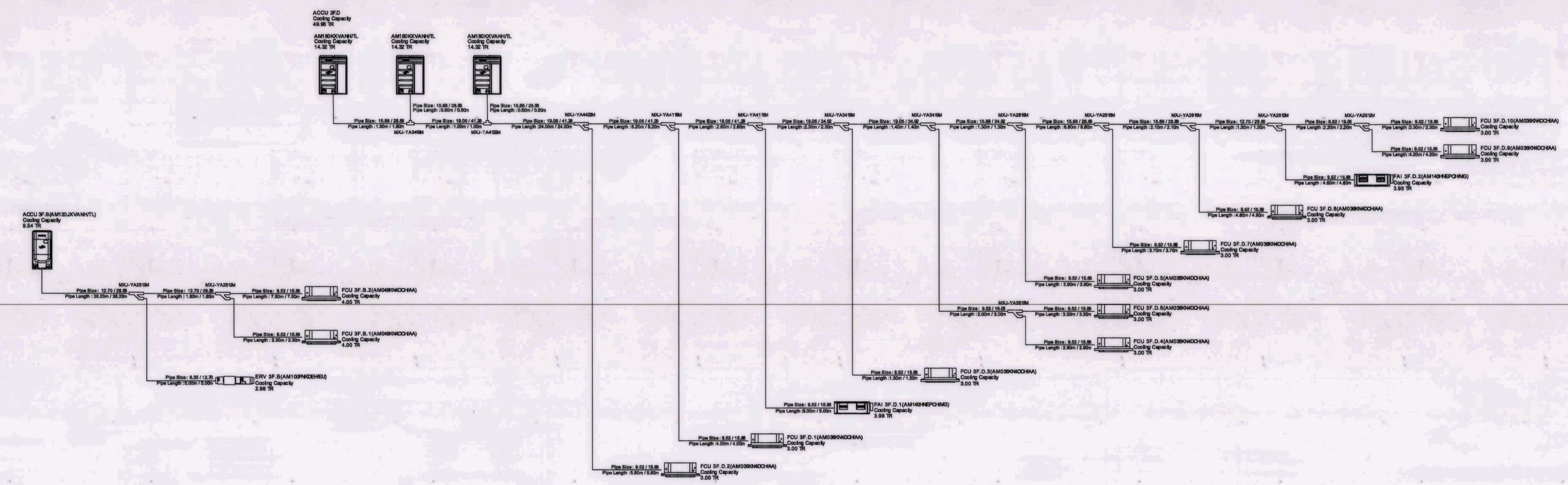

2 / M7-03 THIRD FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-3F.B)

SCALE: NTS

4 / M7-03 THIRD FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-3F.D)

SCALE: NTS

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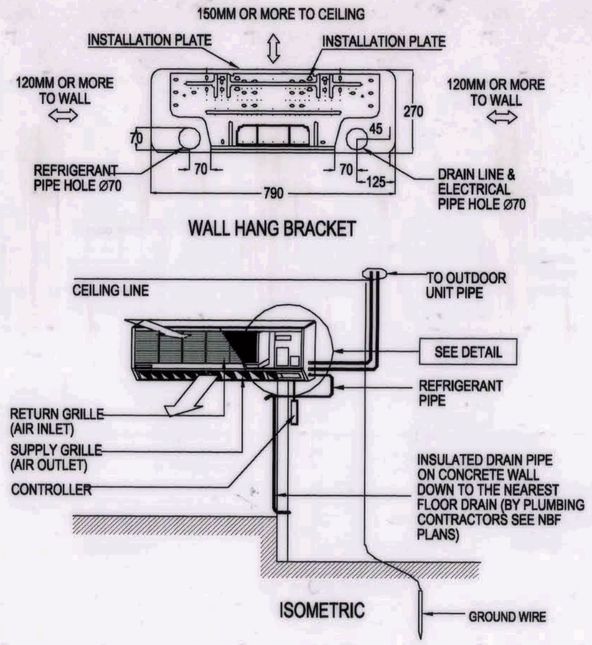
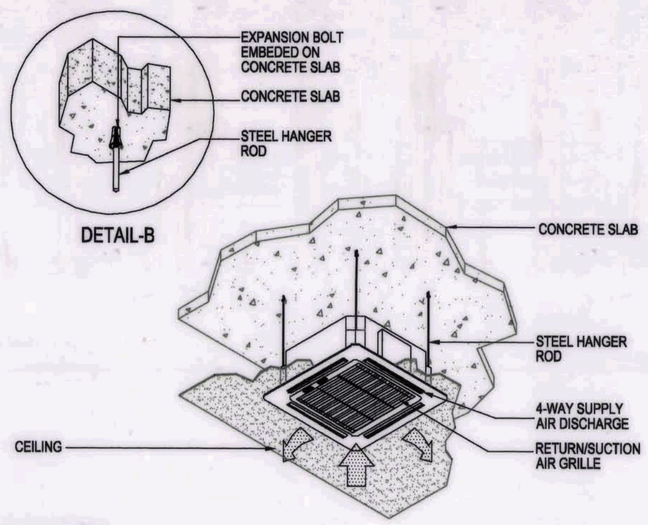
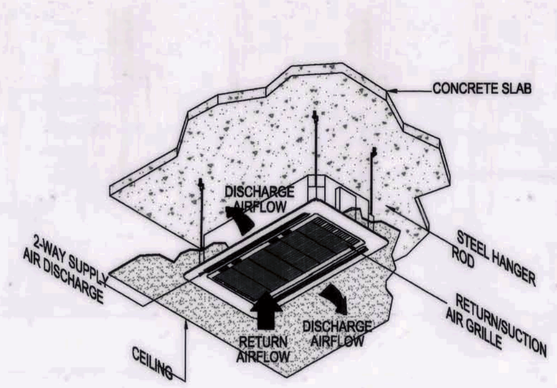
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON PRESIDENT PATRICK NICHOLAS P.DAVID PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1935 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL #(02)654-4152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Accons Milestone Bldg. 1045 Aurora Blvd. Quezon City Philippines 111 Tel. (632) 421-2851 to 74 Fax. (632) 421-2431 Email : fildravo@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS 5th Flr. Folio Bldg., 109 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8176311 to 18 VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-3F.A/ACCU-3F.B/ ACCU-3F.C & ACCU-3F.D)	M7-03



1 / M8-01 TYPICAL FCU WALL MOUNTED INSTALLATION
NOT TO SCALE



2 / M8-01 TYPICAL CEILING CASSETTE (4-WAY) FCU MOUNTING
NOT TO SCALE



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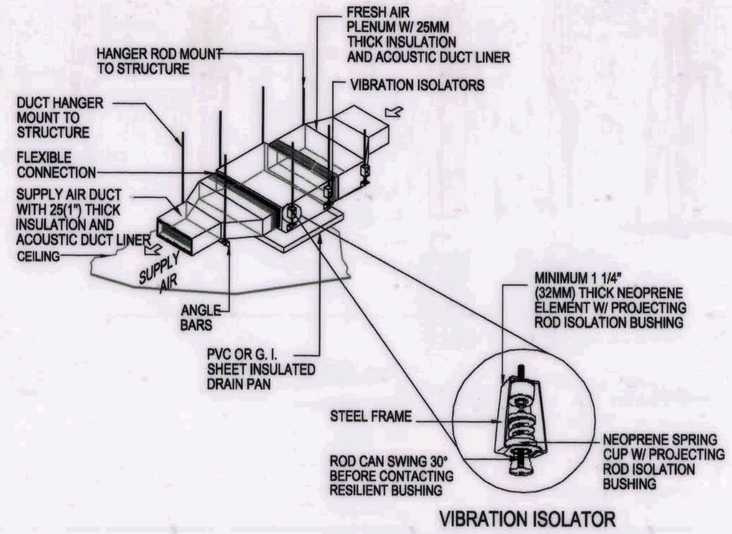

4 / M8-01 FRESH AIR INTAKE MOUNTING
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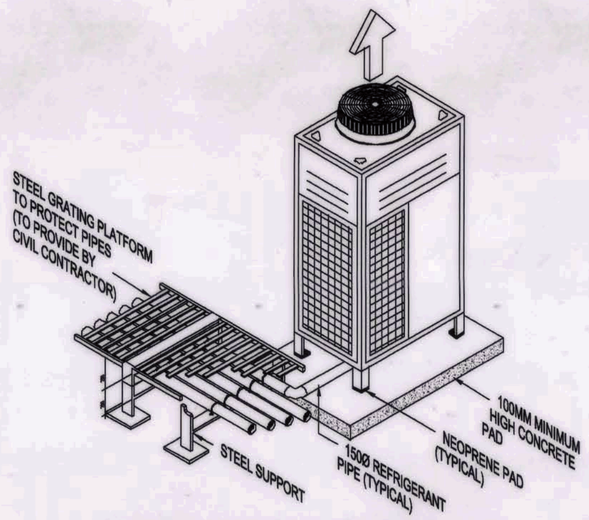
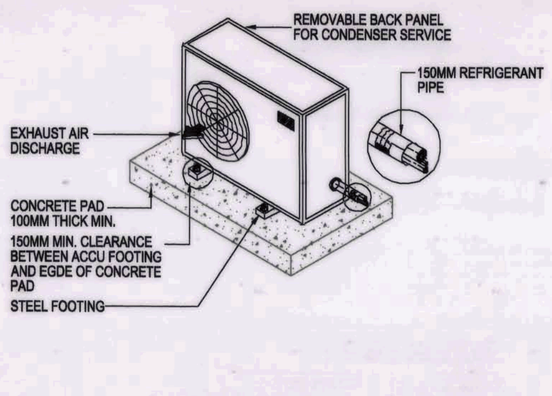
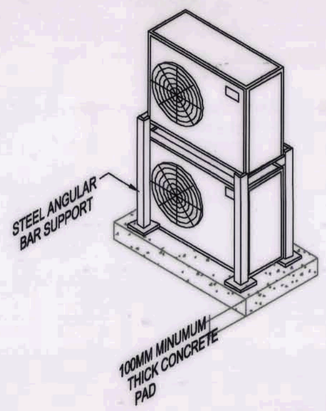


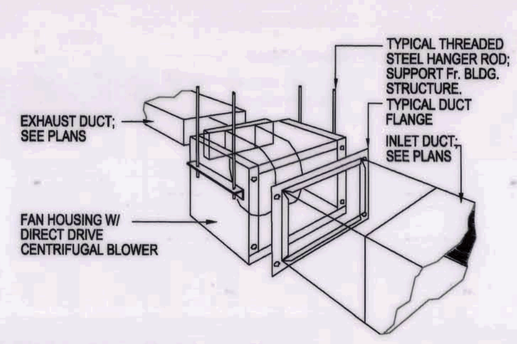
5 / M8-01 ACCU & REFRIGERANT PIPING STEEL GRATING MOUNTING
NOT TO SCALE



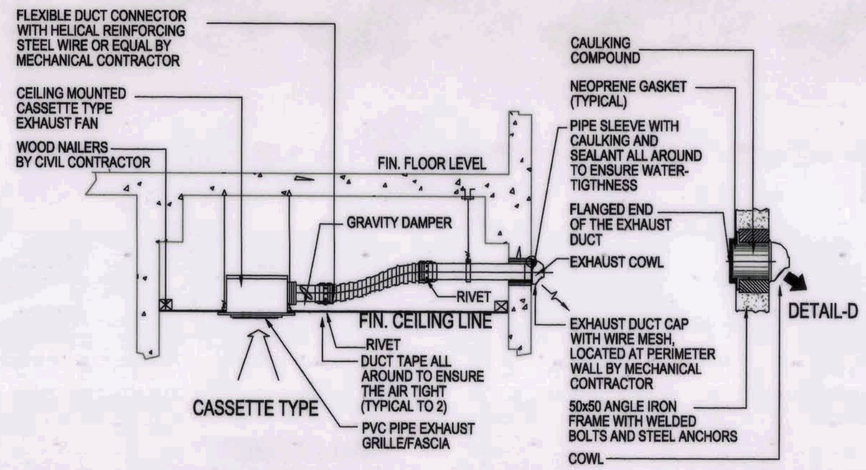
6 / M8-01 TYPICAL ACCU MOUNTING DETAIL
NOT TO SCALE



7 / M8-01 ACCU MOUNTING
NOT TO SCALE



8 / M8-01 CABINET IN-LINE FAN
NOT TO SCALE



9 / M8-01 CASSETTE TYPE EXHAUST FAN DETAIL
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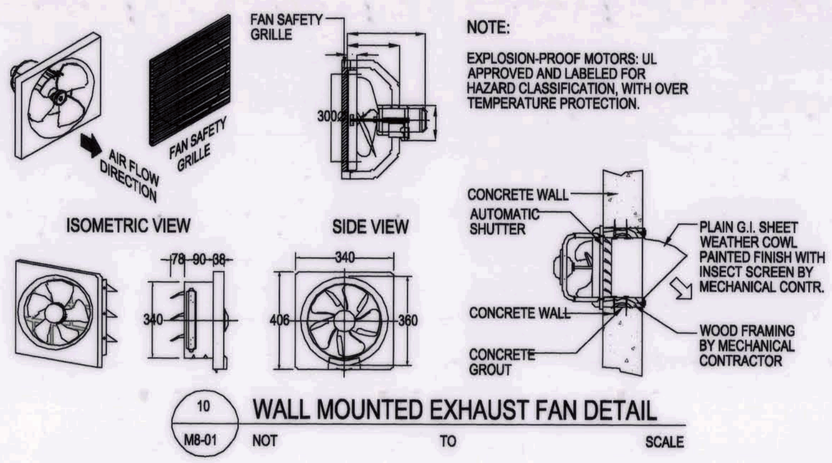

10 / M8-01 WALL MOUNTED EXHAUST FAN DETAIL
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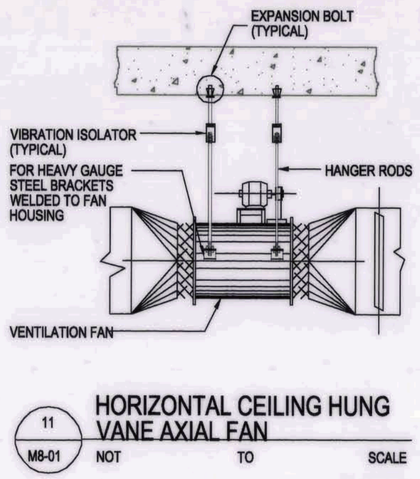
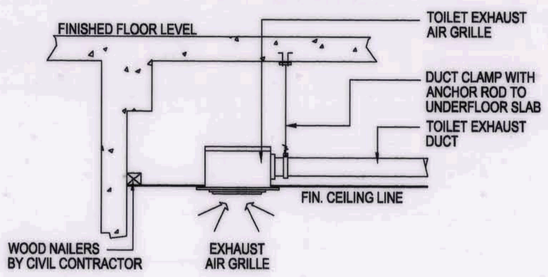
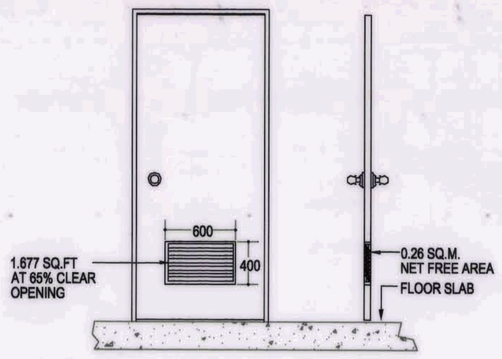


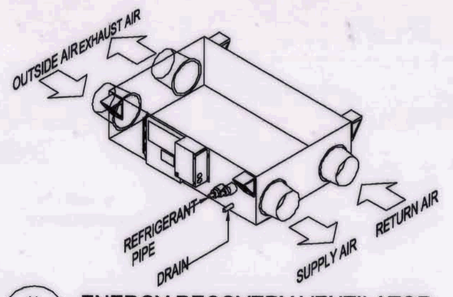
11 / M8-01 HORIZONTAL CEILING HUNG VANE AXIAL FAN
NOT TO SCALE



12 / M8-01 EXHAUST AIR GRILLE INSTALLATION
NOT TO SCALE

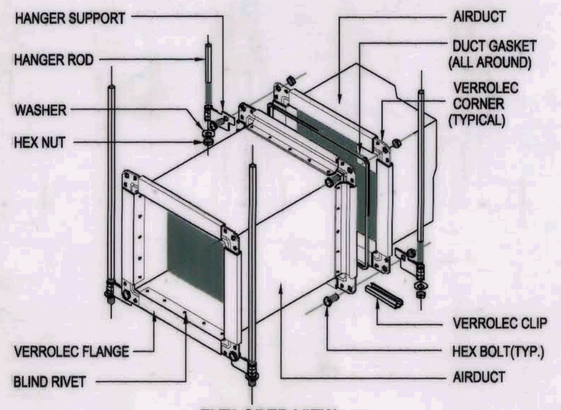


13 / M8-01 TYPICAL LOUVERED DOOR
NOT TO SCALE



14 / M8-01 ENERGY RECOVERY VENTILATOR
NOT TO SCALE

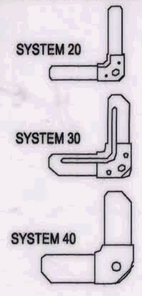
OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1838 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL #:(02)654-4152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 8th Floor Aurora Milestone Bldg., 1045 Aurora Blvd., Quezon City, Philippines 111 Tel. (632) 421-2971 to 74 Fax. (632) 421-2431 Email : fildravo@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS 9th Flr. Tiatco Bldg., 109 V.A. Rufino St. Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	MISCELLANEOUS DETAILS	M8-01



EXPLODED VIEW

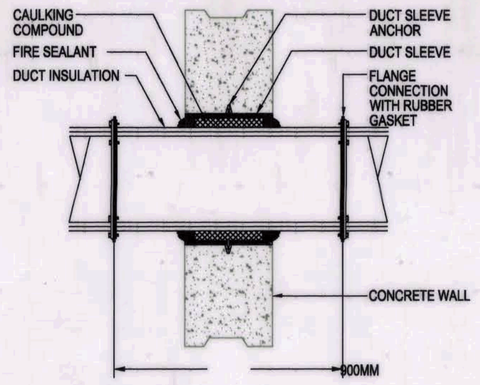
VERROLEC FLANGE AND CORNER SCHEDULE				
FLANGE SIZE	CORNER SIZE	DUCT SIZE	HANGER ROD	BOLT & NUT
SYSTEM 20	SYSTEM 20	100 - 900	3/8"Ø(10mmØ)	5/16"Ø(8mmØ)
SYSTEM 30	SYSTEM 30	950 - 2000	3/8"Ø(10mmØ)	3/8"Ø(10mmØ)
SYSTEM 40	SYSTEM 40	2050 - UP	1/2"Ø(12mmØ)	1/2"Ø(12mmØ)

VERROLEC OR EQUIVALENT FLANGED DUCTWORK

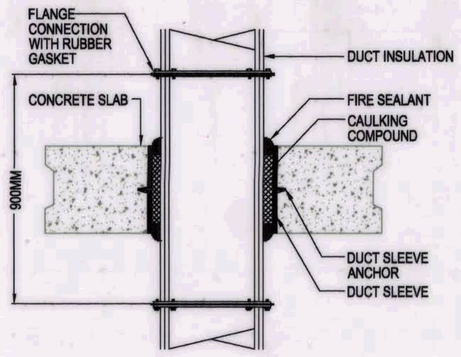


DUCT CORNER

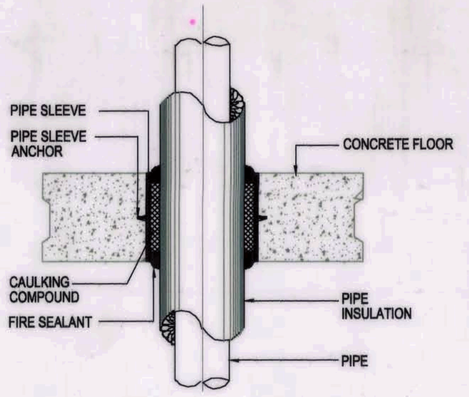
1 M8-02 AIR DUCT ASSEMBLY DETAIL
NOT TO SCALE



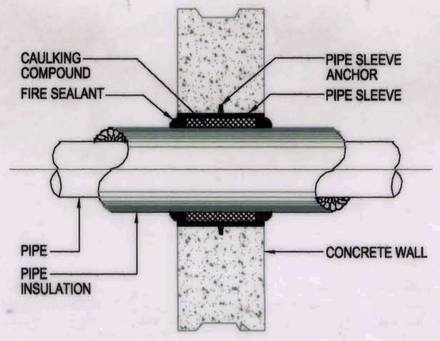
2 M8-02 DUCT THRU WALL
NOT TO SCALE



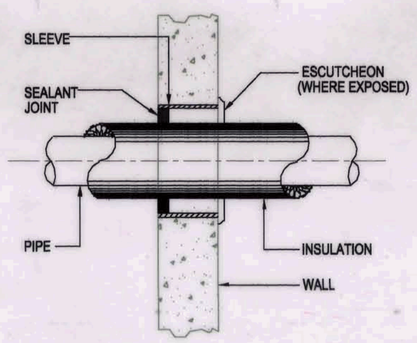
3 M8-02 DUCT THRU FLOOR
NOT TO SCALE



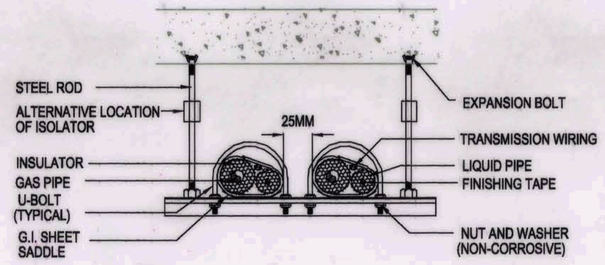
1 M8-02 PIPE THRU ROOF
NOT TO SCALE



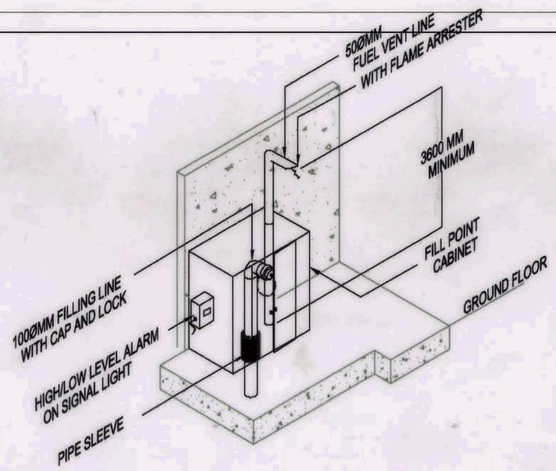
5 M8-02 PIPE THRU WALL
NOT TO SCALE



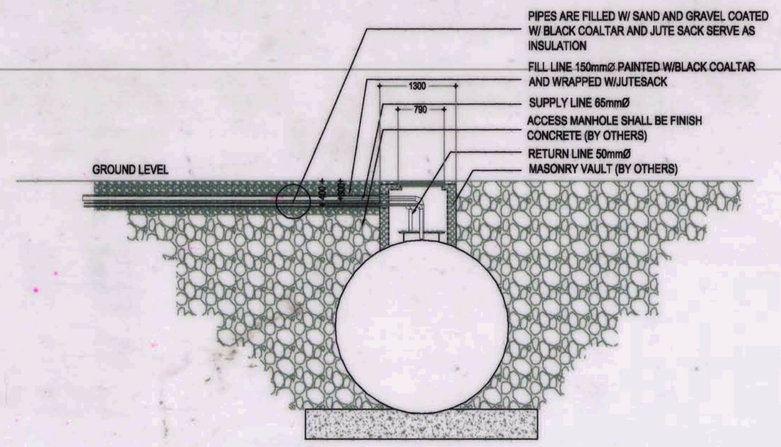
6 M8-02 PIPE SLEEVE
NOT TO SCALE



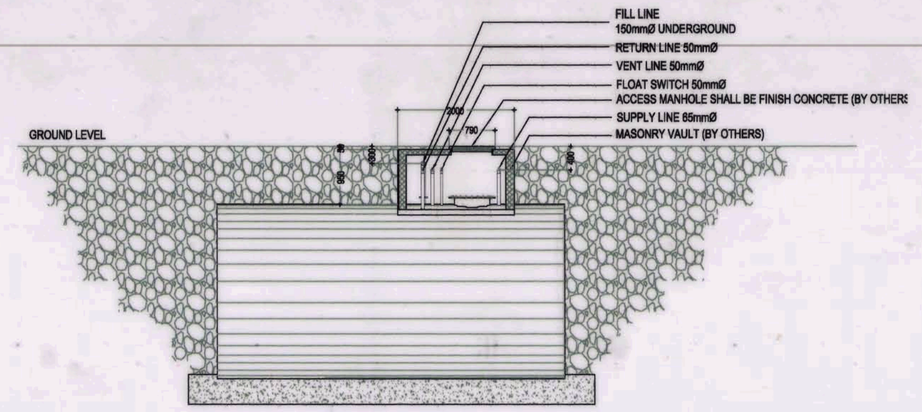
7 M8-02 REFRIGERANT PIPE HANGER
NOT TO SCALE



8 M8-02 FUEL FILL LINE
NOT TO SCALE

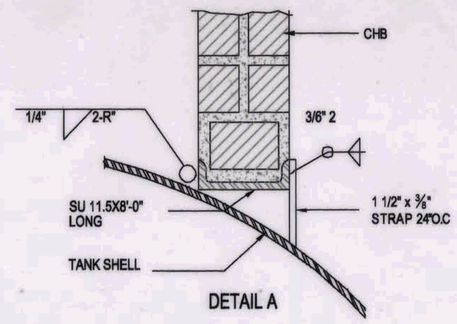


SIDE VIEW



SIDE VIEW

9 M8-02 FUEL OIL STORAGE MOUNTING
NOT TO SCALE



DETAIL A

OWNER: NGAC PHASE 1 JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	HILMARC'S CONSTRUCTION CORPORATION 1635 E. RODRIGUEZ SR. AVENUE CUBAO, QUEZON CITY TEL #:(02)654-4152 to 59 EMAIL: www.hcc.com.ph ANGELITO L. OLLERES, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Avorna Milestone Bldg. 1045 Avorna Blvd., Quezon City Philippines 111 Tel. (632) 431-0871 to 74 Fax. (632) 421-2431 Email : fildravo@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS 9th Flr. Felize Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETICS STADIUM (MECHANICAL) NEW CLARK CITY, CAPAS TARLAC	MISCELLANEOUS DETAIL	M8-02

AQUATICS CENTER

AS-BUILT

MECHANICAL PLANS

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M1-02	EQUIPMENT SCHEDULE
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M7-02	MISCELLANEOUS DETAILS

LEGEND AND SYMBOLS

PLAN / DETAIL NUMBER
SECTION NUMBER
SHEET NUMBER LOCATION

SECTION NUMBER
SHEET NO. LOCATION

EQUIPMENT DESIGNATION
EQUIPMENT NUMBER

DRAWING NUMBER REFERENCE

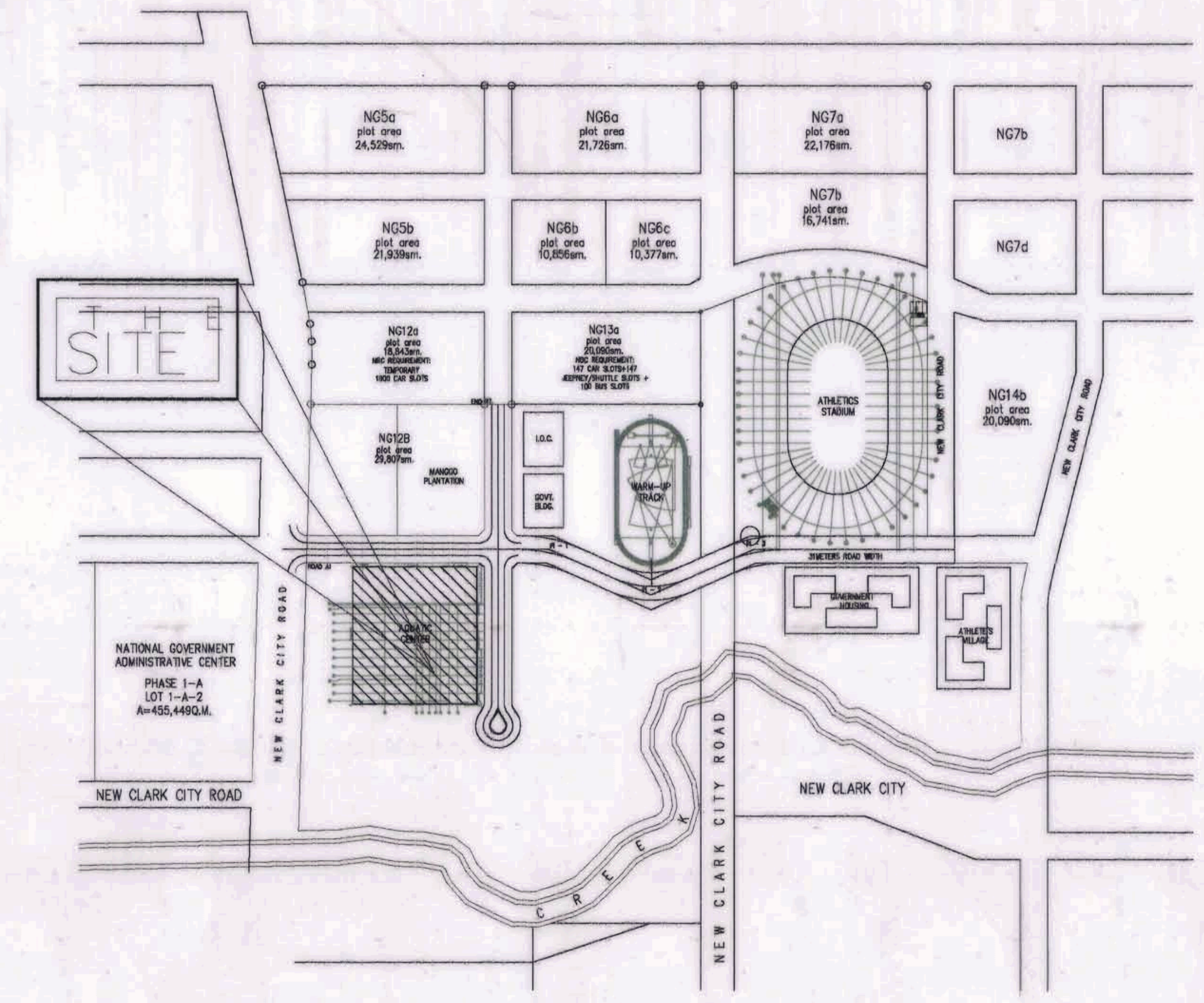
DRAWING NUMBER

TARGET SECTION

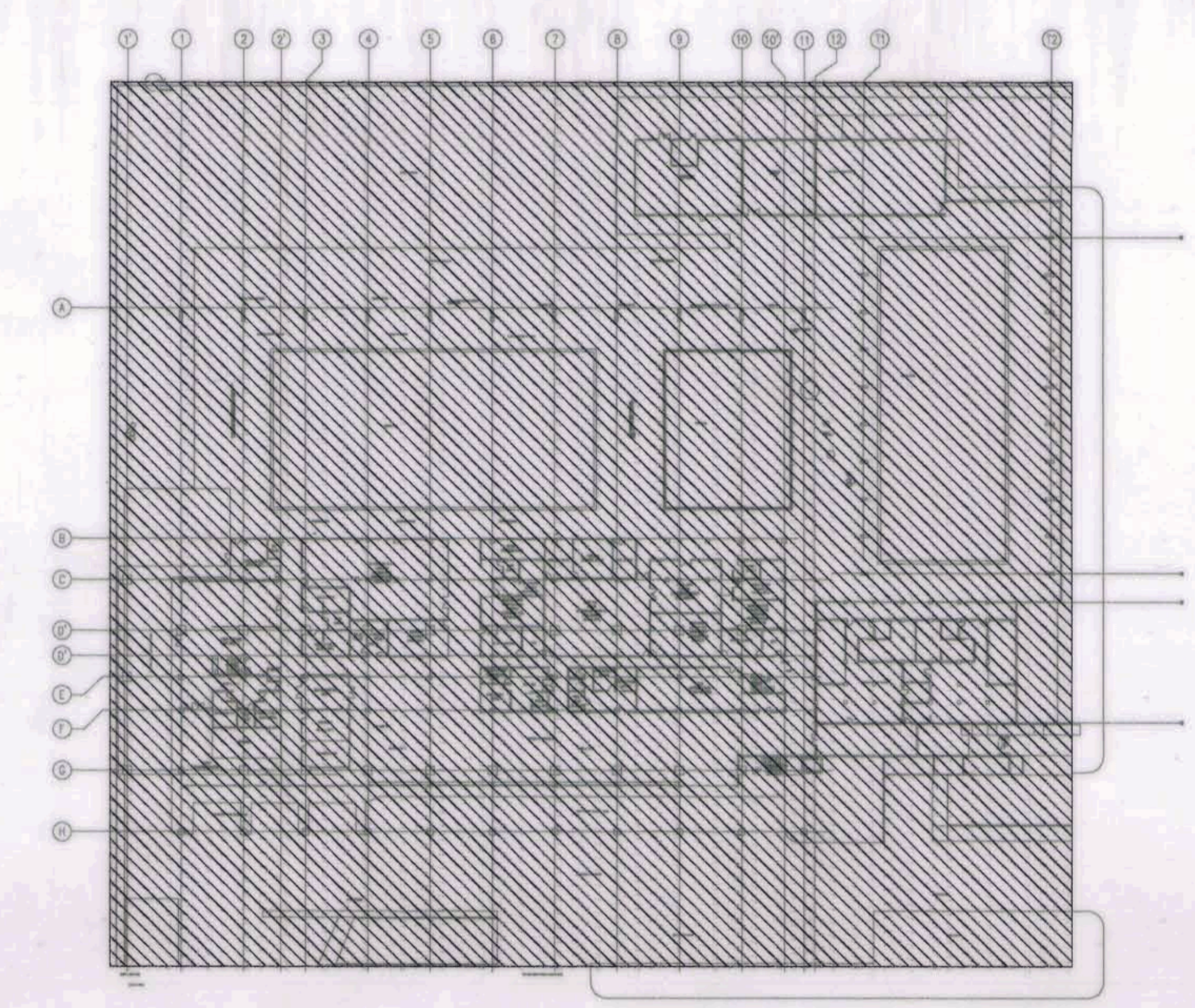
EQUIPMENT MARK

MECHANICAL ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT	KW	KILOWATT
BTU/H	BRITISH THERMAL UNITS PER HOUR	LD	LOUVERED DOOR
°CDB	°CELCIUS DRY BULB	M^3/MIN	CUBIC METER PER MINUTE
CFM	CUBIC FEET PER MINUTE	M/S	METER PER SECOND
CMH	CUBIC METER PER HOUR	MM	MILLIMETER
dB(A)	DECIBEL	OBVD	OPPOSED BLADE VOLUME DAMPER
EAD	EXHAUST AIR DUCT	RPM	REVOLUTION PER MINUTE
EAG	EXHAUST AIR GRILLE	SQ.M	SQUARE METER
EF	EXHAUST FAN	TD	TRANSFER DUCT
ESP	EXTERNAL STATIC PRESSURE	TEF	TOILET EXHAUST FAN
FAD	FRESH AIR DUCT	TR	TONS OF REFRIGERATION
FAF	FRESH AIR FAN	VD	VOLUME DAMPER
FAG	FRESH AIR GRILLE	VRV	VARIABLE REFRIGERANT VOLUME
FAI	FRESH AIR INTAKE	V/PH/HZ	VOLT/PHASE/HERTZ
FLD	FULLY LOUVERED DOOR	W	WATTS
FCU	FAN COIL UNIT	%	PERCENTAGE
FT	FEET		
HxWxD	HEIGHT X WIDTH X DEPTH		
KCAL/H	KILOCALORIE/HOUR		
KG	KILOGRAM		



1 M0-00 VICINITY MAP
SCALE NTS



2 M0-00 SITE DEVELOPMENT PLAN
SCALE NTS

GENERAL SPECIFICATIONS :

1. THE BRAND AND MODEL OF THE LISTED EQUIPMENT WERE USED ONLY TO ESTABLISHED THE DIMENSIONS AND ELECTRICAL LOAD RATINGS FOR THE PURPOSE OF LOCATION AND ELECTRICAL POWER FEED SIZING. THE EQUIPMENT SUPPLIER AND/OR CONTRACTOR WAS PROVIDED OTHER BRAND AND MODEL OF HIGHER EFFICIENCY. DURING THE SITE MOBILIZATION AND EARLY START OF CONSTRUCTION, THE MECHANICAL VENTILATION AND AIR CONDITIONING (MVAC) CONTRACTOR ENSURED THE ACTUAL ELECTRICAL CHARACTERISTIC (V/PH/HZ) THAT WAS PROVIDED FOR EACH OF THE MVAC EQUIPMENT. THIS IS TO ENSURE THAT ALL EQUIPMENT THAT WAS PURCHASED AND SELECTED WILL MATCH WITH THE POWER PROVISIONS.

2.THE SELECTION AND SIZING OF THE SYSTEMS ARE BASED ON THE OPERATING HOURS SPECIFIED BY THE CLIENT FOR THE PROJECT. THE CHOICE OF THE INDOOR UNITS MAY DIFFER IF THE APPLICATION OR OPERATING HOURS WILL CHANGE. THE CAPACITY MATCHING WITH THE OUTDOOR UNITS MAY ALSO BE AFFECTED.

3.THE EXACT LOCATION OF THE FCU, AS WELL AS THE MATCHING ACCUS WAS COORDINATED WITH THE CLIENT AND HIS DULY AUTHORIZED REPRESENTATIVES PRIOR TO INSTALLATION. THE LOCATION OF LOUVERS WAS COMPLIED WITH THE ARCHITECTURAL REQUIREMENTS.

4.EACH FCU WERE PROVIDED WITH ITS OWN DEDICATED ROOM SPACE TEMPERATURE SENSOR AND THE CORRESPONDING CONTROLS FOR THE AUTOMATIC OPERATION AND CAPACITY MODULATION OF THE INSTALLED AC SYSTEM SERVING THAT PARTICULAR AREA. THE LOCATION OF THE ACCU AWAY FROM THE FCU IS WITHIN THE DISTANCE AND HEIGHT DIFFERENTIAL SPECIFIED BY THE MANUFACTURER. THE REFRIGERANT PIPE SIZES AND INSULATION WAS COMPLIED WITH THE RECOMMENDATIONS OF THE MANUFACTURER.

5. THE OUTDOOR UNITS SUCH AS ACCUS, EXHAUST FANS, AND OTHER DEVICE FOR AIR MOVEMENT WERE LOCATED AT AN AREA WHERE THE AIR MOVEMENT WILL NOT BE OBSTRUCTED. THE DIRECTION OF THE DISCHARGE AIR ALLOWED DISTANCE FOR THE HEAT & MOISTURE TO DISSIPATE INTO THE ENVIRONMENT WITHOUT ANY POSSIBLE RE-CIRCULATION BACK TO THE BUILDING. THIS ARRANGEMENT IS CRITICAL TO OBTAIN THE HIGHEST PERFORMANCE EFFICIENCY FOR THE INSTALLED AC SYSTEM AND TAKEN AS THE SOLE RESPONSIBILITY OF THE MVAC CONTRACTOR DURING THE CONSTRUCTION STAGE.

6. THE MVAC CONTRACTOR WAS PROVIDED PIPING FOR EACH FCU WHERE CONDENSATION IS TO BE EXPECTED DUE TO THE NATURE OF OPERATION. THE MVAC CONTRACTOR WAS ALSO PROVIDED THE INSULATED CONDENSATE PIPE AS WELL AS THE NECESSARY CONNECTION TO THE PLUMBING LINE AT A STUB-OUT LOCATED WITHIN 5METERS OF THE FCU. THE MVAC CONTRACTOR WAS COORDINATED THESE STUB-OUT PROVISIONS WITH THE PLUMBING CONTRACTOR ALSO PROVIDED THE NECESSARY VENT AND CLEAN OUT FOR THE REGULAR CLEANING AND MAINTENANCE OF THE CONDENSATE PIPES WITHIN HIS SCOPE.

7. ALL REFRIGERANT PIPING, PLUMBING, AND ELECTRICAL CONDUITS WERE PROPERLY LAID OUT AND INSTALLED WITHOUT AFFECTING THE AESTHETIC APPEARANCE OF THE BUILDING INTERIOR AND EXTERIOR. PREFERABLY, THESE ITEMS WERE CONTAINED INSIDE A PVC MOLDING WITH PAINT FINISH AS APPROVED BY THE ARCHITECT. THE SELECTED OF PAINT COLOR WAS APPROVED ALSO BY THE ARCHITECT.

8. THE MVAC CONTRACTOR WAS SELECTED, SIZED, AND PROVIDED ALL AND ANY MATERIAL, GADGET, DEVICE, OR SUPPORT NECESSARY AND SUITABLE FOR THE EQUIPMENT. THE VIBRATION ISOLATION AND SEISMIC RESTRAINTS WERE CORRECTLY SELECTED AND INSTALLED FOR ALL EQUIPMENT AND SYSTEM COMPONENTS THAT MAY PRODUCE SUCH EFFECT DUE TO THEIR MOVING PARTS OR BECAUSE OF RESONANCE OR TRANSMISSION OF SUCH MECHANICAL FORCE.

9. THE MVAC CONTRACTOR WAS RESPONSIBLE FOR THE CONSTRUCTION OF THE PIPE SLEEVES, FIRE SEALS, STEEL STRUCTURAL PLATFORMS, CONCRETE FOOTINGS AND CORRESPONDING WATER PROOFING RELATED TO HIS INSTALLATION BY THE EARLY AND EFFECTIVE COORDINATION WITH THE OTHER TRADES WHICH COVER SUCH SCOPE. ALL ACCESS PANELS AND SERVICE CLEARANCES FOR THE PREVENTIVE MAINTENANCE AS WELL AS FOR THE PERIODIC REPAIR AND PARTS REPLACEMENTS WERE ALL PROPERLY COORDINATED BY THE MVAC CONTRACTOR WITH THE TRADES WHICH COVER SUCH SCOPE.

10. THE MECHANICAL CONTRACTOR WAS COORDINATED WITH OTHER ENGINEERING TRADES ON THE EQUIPMENT POSITIONING, ELECTRICAL POWER PROVISIONS, DRAIN LINE STUB-OUT REQUIREMENTS, EQUIPMENT DIMENSIONS, MAINTENANCE PADS, WALL AND SLAB OPENINGS.

11. THE MVAC CONTRACTOR WAS COORDINATED THE MVAC SYSTEM REQUIREMENTS FROM OTHER TRADES AT THE SOONEST POSSIBLE TIME. THE CLIENT WAS DECIDED TO PURCHASE THE EQUIPMENT SEPARATELY, THE MVAC CONTRACTOR WAS REVIEWED THE DELINEATION OF WORK BETWEEN THE SUPPLIER AND HIS REMAINING THE MVAC CONTRACTOR WAS PROVIDED ANY AND ALL OTHER ITEMS NECESSARY TO COMPLETE THE INSTALLATION, TESTING, AND COMMISSIONING OF THE OWNER-SUPPLIED EQUIPMENT (EXCLUSIVE OF WARRANTY) AND ALL OTHER ITEMS THAT WERE PART OF THEIR SCOPE.

12. DURING THE SITE MOBILIZATION AND EARLY START OF CONSTRUCTION, THE MVAC CONTRACTOR ENSURED THE ACTUAL ELECTRICAL CHARACTERISTICS (V/PH/HZ) FOR EACH OF THE MVAC EQUIPMENT. TO ENSURE THAT ALL EQUIPMENT WERE PURCHASED AND SELECTED WILL MATCH WITH THE POWER PROVISIONS.

13. THE INTERNATIONAL BUILDING CODE (IBC) 2009 - SECTION 403.5.4 SMOKE PROOF EXIT ENCLOSURES: "EVERY REQUIRED LEVEL EXIT STAIRWAY SERVING FLOORS MORE THAN 22.86M (75FT) ABOVE THE LOWEST LEVEL OF FIRE DEPARTMENT VECHICLE ACCESS WAS COMPLIED WITH SECTIONS 909.20 AND 1002.9 REQUIRING STAIR MECHANICAL PRESSURIZATION SYSTEM.

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.
The Design Consultant shall be held fully responsible for the failure of the facilities/structures due to faulty design except for the changes made without the conformity of the Design Consultants.

GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE NTS

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. — VIVENCIO B. DIZON, PRESIDENT; PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation, 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City — JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS, 5th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING, NGAC PHASE 1A, AQUATIC CENTER, NEW CLARK CITY, CAPAS, TARLAC	TABLE OF CONTENTS, VICINITY MAP, SITE DEV PLAN, LEGENDS & SYMBOLS, & MECHANICAL ABBREVIATIONS	M0-00

EQUIPMENT SCHEDULE1

VRV SYSTEM-LGA (LOWER GROUND)

FAN COIL UNIT (FLOOR STANDING)			
UNIT DESIGNATION			FCU-LGA.1 TO FCU-LGA.5
QUANTITY			5
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	12,000
		BTU/H	47,800
		KW	14.0
POWER CONSUMPTION		KW	0.19
AIRFLOW RATE (H/L)		M³/MIN	32.0/30.5/27.5
		CFM	1,129/1,076/970
SOUND LEVEL (H/L)		dB(A)	54/47
DIMENSION (HxWxD)		MM	610 x 1850 x400
MACHINE WEIGHT		KG	48
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS		ø15.88
	DRAIN		ID 18 HOSE
REMARKS			UNIT IS SAMSUNG BRAND

FAN COIL UNIT (CEILING CASSETTE)			
UNIT DESIGNATION			FCU-LGA.6
QUANTITY			1
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	12,100
		BTU/H	48,000
		KW	14.07
POWER CONSUMPTION		KW	0.95
AIRFLOW RATE (H/L)		M³/MIN	29.0/27.0/24.0
		CFM	1,023/952/846
SOUND LEVEL (H/L)		dB(A)	44/42/39
DIMENSION (HxWxD)		MM	840 x 288x 840
MACHINE WEIGHT		KG	18.5
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS		ø15.88
	DRAIN		VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

FRESH AIR INTAKE (CONCEALED)			
UNIT DESIGNATION			FAI-LGA
QUANTITY			1
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	11,953
		BTU/H	47,400
		KW	14.0
POWER CONSUMPTION		KW	0.220
AIRFLOW RATE (H/L)		M³/MIN	18
		CFM	635
ESP		PA	245
SOUND LEVEL (H/L)		dB(A)	42
DIMENSION (HXWXD)		MM	390 x 1,110 x 650
MACHINE WEIGHT		KG	51
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS		ø15.88
	DRAIN		VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)			
UNIT DESIGNATION			ACCU-LGA
QUANTITY			1
POWER SUPPLY			380V / 3PH / 60 HZ
COOLING CAPACITY		TR	31.83
		KCAL/H	96,306
		BTU/H	381,920
		KW	112
POWER CONSUMPTION		KW	29.85
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		SSC SCROLL X 2
	MOTOR OUTPUT	KW	(6.39 x 2)+(6.39 x 2)
AIRFLOW RATE		M³/MIN	290+290
DIMENSION (HXWXD)		MM	(1,295 x 1,695 x 765)+(1,295 x 1,695 x 765)
MACHINE WEIGHT		KG	307+307
SOUND LEVEL		dB(A)	66
OPERATION RANGE		°CDB	-5 TO 49
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	8.4+8.4
PIPING CONNECTIONS	LIQUID	MM	ø15.88. (BRAZING)
	GAS	MM	ø28.58 (BRAZING)

VRV SYSTEM-LGB.2 (LOWER GROUND)

FAN COIL UNIT (CEILING CASSETTE)				
UNIT DESIGNATION			FCU-LGB.7	FCU-LGB.5, FCU-LGB.6
QUANTITY			1	2
POWER SUPPLY			230V / 1PH / 60HZ	230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0	2.5
		KCAL/H	12,100	7,565
		BTU/H	48,000	30,000
		KW	14.7	8.79
POWER CONSUMPTION		KW	0.95	0.065
AIRFLOW RATE (H/L)		M³/MIN	29.0/27.0/24.0	22/19.5/17.0
		CFM	1023/952/846	776/688/600
SOUND LEVEL (H/L)		dB(A)	44/42/39	39/34/30
DIMENSION (HXWXD)		MM	840 x 288 x840	288 x 840 x 840
MACHINE WEIGHT		KG	18.5	18.5
PIPING CONNECTIONS	LIQUID	MM	ø9.52	ø9.52
	GAS		ø15.88	ø15.88
	DRAIN		VP25 (EXTERNAL DIA. 32/INTERNAL DIA. 25)	VP25 (EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND	UNIT IS SAMSUNG BRAND

FRESH AIR INTAKE (CONCEALED)			
UNIT DESIGNATION			FAI-LGA
QUANTITY			1
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	11,953
		BTU/H	47,400
		KW	14.0
POWER CONSUMPTION		KW	0.220
AIRFLOW RATE (H/L)		M³/MIN	18
		CFM	635
ESP		PA	245
SOUND LEVEL (H/L)		dB(A)	42
DIMENSION (HXWXD)		MM	390 x 1,110 x 650
MACHINE WEIGHT		KG	51
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS		ø15.88
	DRAIN		VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)			
UNIT DESIGNATION			ACCU-LGB.2
QUANTITY			1
POWER SUPPLY			380V / 3PH / 60 HZ
COOLING CAPACITY		TR	15.92
		KCAL/H	48,189
		BTU/H	191,100
		KW	56
POWER CONSUMPTION		KW	14.59
POWER CONTROL		%	8-100
COMPRESSOR	TYPE		SSC SCROLL x 2
	MOTOR OUTPUT	KW	6.39 x 2
AIRFLOW RATE		M³/MIN	290
DIMENSION (HXWXD)		MM	1295 x 1695 x 765
MACHINE WEIGHT		KG	307
SOUND LEVEL		dB(A)	65
OPERATION RANGE		°CDB	-5 TO 48
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	8.4
PIPING CONNECTIONS	LIQUID	MM	ø15.88 (BRAZING)
	GAS	MM	ø28.58 (BRAZING)

VRV SYSTEM-LGC (LOWER GROUND)

FAN COIL UNIT (CEILING CASSETTE)				
UNIT DESIGNATION			FCU-LGC.6	FCU-LGC.1 TO FCU-LGC.5
QUANTITY			1	5
POWER SUPPLY			230V / 1PH / 60HZ	230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0	4.0
		KCAL/H	12,100	12,100
		BTU/H	48,000	48,000
		KW	14.07	14.07
POWER CONSUMPTION		KW	0.95	0.95
AIRFLOW RATE (H/L)		M³/MIN	29.0/27.0/24.0	29.0/27.0/24.0
		CFM	1,023/952/846	1,023/952/846
SOUND LEVEL (H/L)		dB(A)	44/42/39	44/42/39
DIMENSION (HXWXD)		MM	840 x288 x 840	840 x 288 x 840
MACHINE WEIGHT		KG	18.5	18.5
PIPING CONNECTIONS	LIQUID	MM	ø9.52	ø9.52
	GAS		ø15.88	ø15.88
	DRAIN		VP25(EXTERNAL DIA. 32/ INTERNAL DIA. 25)	VP25(EXTERNAL DIA. 32/ INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND	UNIT IS SAMSUNG BRAND

FRESH AIR INTAKE (CONCEALED)			
UNIT DESIGNATION			FAI-LGA
QUANTITY			1
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	
		KCAL/H	11,953
		BTU/H	47,400
		KW	14.0
POWER CONSUMPTION		KW	0.220
AIRFLOW RATE (H/L)		M³/MIN	18
		CFM	635
ESP		PA	245
SOUND LEVEL (H/L)		dB(A)	42
DIMENSION (HXWXD)		MM	390 x 1,110 x 650
MACHINE WEIGHT		KG	51
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS		ø15.88
	DRAIN		ID 18 HOSE
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)			
UNIT DESIGNATION			ACCU-LGC
QUANTITY			1
POWER SUPPLY			380V / 3PH / 60 HZ
COOLING CAPACITY		TR	30.28
		KCAL/H	91,663
		BTU/H	363,506
		KW	106.6
POWER CONSUMPTION		KW	28.95
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		SSC SCROLL x 2
	MOTOR OUTPUT	KW	(6.39 x 2) + (6.39 x 2)
AIRFLOW RATE		M³/MIN	290+290
DIMENSION (HXWXD)		MM	(1,295 x 1,695 x 765)+ (1,295 X 1,695 X 765)
MACHINE WEIGHT		KG	307+307
SOUND LEVEL		dB(A)	66
OPERATION RANGE		°CDB	-5 TO 48
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	8.4+8.4
PIPING CONNECTIONS	LIQUID	MM	ø15.88 (BRAZING)
	GAS	MM	ø28.58 (BRAZING)

VRV SYSTEM-LGD (LOWER GROUND)

FAN COIL UNIT (CEILING CASSETTE)					
UNIT DESIGNATION			FCU-LGD.4	FCU-LGD.2, FCU-LGD.3	FCU-LGD.5, FCU-LGD.8	FCU-LGD.1
QUANTITY			1	1	4	1
POWER SUPPLY			230V / 1PH / 60HZ	230V / 1PH / 60HZ	230V / 1PH / 60HZ	230V / 1PH / 60HZ
COOLING CAPACITY		TR	2.0	2.5	4.0	4.0
		KCAL/H	6,051	7,565	12,100	12,100
		BTU/H	24,000	30,000	48,000	48,000
		KW	7.03	8.79	14.07	14.07
POWER CONSUMPTION		KW	0.040	0.065	0.95	0.95
AIRFLOW RATE (H/L)		M³/MIN	17.50/16.0/14.0	22/19.5/17.0	29.0/27.0/24.0	29.0/27.0/24.0
		CFM	618/565/494	776/688/600	1,023/952/846	1,023/952/846
SOUND LEVEL (H/L)		dB(A)	36/35/34	39/34/30	44/42/39	44/42/39
DIMENSION (HXWXD)		MM	204 x 840 x 840	288 x 840 x 840	840 x 288 x 840	840 x 288 x 840
MACHINE WEIGHT		KG	15	18.5	18.5	18.5
PIPING CONNECTIONS	LIQUID	MM	ø6.35	ø9.52	ø9.52	ø9.52
	GAS		ø12.7	ø15.88	ø15.88	ø15.88
	DRAIN		VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND	UNIT IS SAMSUNG BRAND	UNIT IS SAMSUNG BRAND	UNIT IS SAMSUNG BRAND

FRESH AIR INTAKE (CONCEALED)			
UNIT DESIGNATION			FAI-LGD.1 & FAI LG2.2
QUANTITY			2
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	11,953
		BTU/H	47,400
		KW	14.0
POWER CONSUMPTION		KW	0.220
AIRFLOW RATE (H/L)		M³/MIN	18
		CFM	635
ESP		PA	245
SOUND LEVEL (H/L)		dB(A)	42
DIMENSION (HXWXD)		MM	390 x 1,110 x 650
MACHINE WEIGHT		KG	51
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS		ø15.88
	DRAIN		VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)			
UNIT DESIGNATION			ACCU-LGD
QUANTITY			1
POWER SUPPLY			380V / 3PH / 60 HZ
COOLING CAPACITY		TR	35
		KCAL/H	105,938
		BTU/H	420,112
		KW	123.2
POWER CONSUMPTION		KW	34.7
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		SSC SCROLL x 2
	MOTOR OUTPUT	KW	6.39 x 2
AIRFLOW RATE		M³/MIN	290
DIMENSION (HXWXD)		MM	(1,295 x 1,695 x 765)
MACHINE WEIGHT		KG	307
SOUND LEVEL		dB(A)	66
OPERATION RANGE		°CDB	-5 TO 48
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	8.4
PIPING CONNECTIONS	LIQUID	MM	ø15.88 (BRAZING)
	GAS	MM	ø28.58 (BRAZING)

VRV SYSTEM-LGE (LOWER GROUND)

FAN COIL UNIT (CEILING CASSETTE)				
UNIT DESIGNATION			FCU-LGE.3, FCU-LGE.4	FCU-LGE.1,FCU-LGE.2,FCU-LGE.5 TO FCU-LGE.7
QUANTITY			2	5
POWER SUPPLY			230V / 1PH / 60HZ	230V / 1PH / 60HZ
COOLING CAPACITY		TR	2.5	4.0
		KCAL/H	7,565	12,100
		BTU/H	30,000	48,000
		KW	8.79	14.7
POWER CONSUMPTION		KW	0.065	0.95
AIRFLOW RATE (H/L)		M³/MIN	22/19.5/17.0	29.0/27.0/24.0
		CFM	776/688/600	1023/952/846
SOUND LEVEL (H/L)		dB(A)	39/34/30	44/42/39
DIMENSION (HXWXD)		MM	288 x 840 x 840	288 x 840 x 840
MACHINE WEIGHT		KG	18.5	18.5
PIPING CONNECTIONS	LIQUID	MM	ø9.52	ø9.52
	GAS		ø15.88	ø15.88
	DRAIN		VP25 (EXTERNAL DIA. 32/INTERNAL DIA. 25)	VP25 (EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND	UNIT IS SAMSUNG BRAND

FRESH AIR INTAKE (CONCEALED)			
UNIT DESIGNATION			FAI-LGE.1 & FAI LGE.2
QUANTITY			2
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	11,953
		BTU/H	47,400
		KW	14.0
POWER CONSUMPTION		KW	0.220
AIRFLOW RATE (H/L)		M³/MIN	18
		CFM	635
ESP		PA	245
SOUND LEVEL (H/L)		dB(A)	42
DIMENSION (HXWXD)		MM	390 x 1,110 x 650
MACHINE WEIGHT		KG	51
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS		ø15.88
	DRAIN		VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)			
UNIT DESIGNATION			ACCU-LGE
QUANTITY			1
POWER SUPPLY			380V / 3PH / 60 HZ
COOLING CAPACITY		TR	35
		KCAL/H	105,938
		BTU/H	420,112
		KW	123.3
POWER CONSUMPTION		KW	34.7
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		SSC SCROLL x 2
	MOTOR OUTPUT	KW	6.39 x 2
AIRFLOW RATE		M³/MIN	290
DIMENSION (HXWXD)		MM	1295 x 1695 x 765
MACHINE WEIGHT		KG	307
SOUND LEVEL		dB(A)	65
OPERATION RANGE		°CDB	-5 TO 48
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	8.4
PIPING CONNECTIONS	LIQUID	MM	ø19.1 (BRAZING)
	GAS	MM	ø41.3 (BRAZING)

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

The Design Consultant shall be held fully responsible for the failure of the facilities/structures due to faulty design except for the changes made without the conformity of the Design Consultants.

GRAPHIC SCALE:

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SCALE NTS

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OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation, 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City — JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING; NGAC PHASE 1A; AQUATIC CENTER; NEW CLARK CITY, CAPAS, TARLAC	EQUIPMENT SCHEDULE 1	M1-01

EQUIPMENT SCHEDULE2

VRV SYSTEM-LGF (LOWER GROUND)

FAN COIL UNIT (CEILING CASSETTE)

UNIT DESIGNATION			FCU-LGF.1 TO FCU-LGF.4
QUANTITY			4
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	12,100
		BTU/H	48,000
		KW	14.07
POWER CONSUMPTION		KW	0.95
AIRFLOW RATE (H/L)		M^3/MIN	29.0/27.0/24.0
		CFM	1,023/952/846
SOUND LEVEL (H/L)		dB(A)	44/42/39
DIMENSION (HxWxD)		MM	840 x 288x 840
MACHINE WEIGHT		KG	18.5
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS	MM	ø15.88
	DRAIN	MM	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

FRESH AIR INTAKE (CONCEALED)

UNIT DESIGNATION			FAI-LGF.1,FAI-LGF.2
QUANTITY			2
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	11,953
		BTU/H	47,400
		KW	14.0
POWER CONSUMPTION		KW	0.220
AIRFLOW RATE (H/L)		M^3/MIN	18
		CFM	635
ESP		PA	245
SOUND LEVEL (H/L)		dB(A)	42
DIMENSION (HXWXD)		MM	390 x 1,110 x 650
MACHINE WEIGHT		KG	51
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS	MM	ø15.88
	DRAIN	MM	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)

UNIT DESIGNATION			ACCU-LGF
QUANTITY			1
POWER SUPPLY			380V / 3PH / 60 HZ
COOLING CAPACITY		TR	27.04
		KCAL/H	81,861
		BTU/H	324,632
		KW	95.2
POWER CONSUMPTION		KW	26.15
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		SSC SCROLL X 2
	MOTOR OUTPUT	KW	(6.39 x 2)+(6.39 x 2)
AIRFLOW RATE		M^3/MIN	290+290
DIMENSION (HXWXD)		MM	(1,295 x 1,695 x 765)+(1,295 x 1,695 x 765)
MACHINE WEIGHT		KG	307+307
SOUND LEVEL		dB(A)	66
OPERATION RANGE		°CDB	-5 TO 49
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	8.4+8.4
PIPING CONNECTIONS	LIQUID	MM	ø15.88. (BRAZING)
	GAS	MM	ø28.58 (BRAZING)

VRV SYSTEM-LGG (LOWER GROUND)

FAN COIL UNIT (CEILING CASSETTE)

UNIT DESIGNATION			FCU-LGG.7,FCU-LGG.9	FCU-LGG.5	FCU-LGG.4, FCU-LGG.8
QUANTITY			2	1	2
POWER SUPPLY			230V / 1PH / 60HZ	230V / 1PH / 60HZ	230V / 1PH / 60HZ
COOLING CAPACITY		TR	2.0	2.5	4.0
		KCAL/H	6,051	7,565	12,100
		BTU/H	24,000	30,000	48,000
		KW	7.03	8.79	14.07
POWER CONSUMPTION		KW	0.040	0.065	0.95
AIRFLOW RATE (H/L)		M^3/MIN	17.50/16.0/14.0	22/19.5/17.0	29.0/27.0/24.0
		CFM	618/565/494	776/688/600	1,023/952/846
SOUND LEVEL (H/L)		dB(A)	36/35/34	39/34/30	44/42/39
DIMENSION (HXWXD)		MM	288 x 840 x 840	288 x 840 x 840	840 x 288x 840
MACHINE WEIGHT		KG	18.5	18.5	18.5
PIPING CONNECTIONS	LIQUID	MM	ø9.52	ø9.52	ø9.52
	GAS	MM	ø15.88	ø15.88	ø15.88
	DRAIN	MM	VP25 (EXTERNAL DIA. 32/INTERNAL DIA. 25)	VP25 (EXTERNAL DIA. 32/INTERNAL DIA. 25)	VP25 (EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND	UNIT IS SAMSUNG BRAND	UNIT IS SAMSUNG BRAND

FAN COIL UNIT (WALL MOUNTED)

UNIT DESIGNATION			FCU-LGG.6, FCU-LGG.3,FCU-LGG.7	FCU-LGG.2 & FCU-LGG.10
QUANTITY			3	2
POWER SUPPLY			230V / 1PH / 60HZ	230V / 1PH / 60HZ
COOLING CAPACITY		TR	0.8	1.0
		KCAL/H	2,396	12,104
		BTU/H	9,500	48,000
		KW	2.8	3.5
POWER CONSUMPTION		KW	0.039	0.042
AIRFLOW RATE (H/L)		M^3/MIN	7.0/6.2/5.5	8.5/7.5/6.6
		CFM	247/219/194	141.7/125.0/110
SOUND LEVEL (H/L)		dB(A)	31/29/26	36/33/29
DIMENSION (HXWXD)		MM	820 x285 x 227	820 x285 x 227
MACHINE WEIGHT		KG	9.0	18.5
PIPING CONNECTIONS	LIQUID	MM	ø6.35	ø9.52
	GAS	MM	ø12.7	ø15.88
	DRAIN	MM	ID 18 HOSE	VP25(EXTERNAL DIA. 32/ INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND	UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)

UNIT DESIGNATION			ACCU-LGG
QUANTITY			1
POWER SUPPLY			380V / 3PH / 60 HZ
COOLING CAPACITY		TR	19.1
		KCAL/H	57,821
		BTU/H	229,300
		KW	67.2
POWER CONSUMPTION		KW	17.1
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		SSC SCROLL X 2
	MOTOR OUTPUT	KW	26.39 X 2
AIRFLOW RATE		M^3/MIN	340
DIMENSION (HXWXD)		MM	1,295 x 1,795 765
MACHINE WEIGHT		KG	331
SOUND LEVEL		dB(A)	66
OPERATION RANGE		°CDB	-5 TO 48
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	12.5
PIPING CONNECTIONS	LIQUID	MM	ø15.88 (BRAZING)
	GAS	MM	ø34.92 (BRAZING)

VRV SYSTEM-UGH (UPPER GROUND)

FRESH AIR INTAKE (CONCEALED)

UNIT DESIGNATION			FAI-UGH
QUANTITY			1
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	11,953
		BTU/H	47,400
		KW	14.0
POWER CONSUMPTION		KW	0.220
AIRFLOW RATE (H/L)		M^3/MIN	18
		CFM	635
ESP		PA	245
SOUND LEVEL (H/L)		dB(A)	42
DIMENSION (HXWXD)		MM	390 x 1,110 x 650
MACHINE WEIGHT		KG	51
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS	MM	ø15.88
	DRAIN	MM	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)

UNIT DESIGNATION			ACCU-UGH
QUANTITY			1
POWER SUPPLY			230V / 1PH / 60 HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	12,482
		BTU/H	49,500
		KW	14.5
POWER CONSUMPTION		KW	3.9
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		TWIN BLDC ROTARY x 1
	MOTOR OUTPUT	KW	4.12
AIRFLOW RATE		M^3/MIN	60
DIMENSION (HXWXD)		MM	940 x 998 x 330
MACHINE WEIGHT		KG	76
SOUND LEVEL		dB(A)	-
OPERATION RANGE		°CDB	-5 TO 48
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	2.0
PIPING CONNECTIONS	LIQUID	MM	ø9.52. (BRAZING)
	GAS	MM	ø15.88 (BRAZING)

VRV SYSTEM-UGI (UPPER GROUND)

FRESH AIR INTAKE (CONCEALED)

UNIT DESIGNATION			FAI-UGI
QUANTITY			1
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	11,953
		BTU/H	47,400
		KW	14.0
POWER CONSUMPTION		KW	0.220
AIRFLOW RATE (H/L)		M^3/MIN	18
		CFM	635
ESP		PA	245
SOUND LEVEL (H/L)		dB(A)	42
DIMENSION (HXWXD)		MM	390 x 1,110 x 650
MACHINE WEIGHT		KG	51
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS	MM	ø15.88
	DRAIN	MM	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)

UNIT DESIGNATION			ACCU-UGI
QUANTITY			1
POWER SUPPLY			230V / 1PH / 60 HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	13,768
		BTU/H	54,600
		KW	16
POWER CONSUMPTION		KW	4.2
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		TWIN BLDC ROTARY x 1
	MOTOR OUTPUT	KW	4.12
AIRFLOW RATE		M^3/MIN	95
DIMENSION (HXWXD)		MM	940 x 1,210 x 330
MACHINE WEIGHT		KG	95
SOUND LEVEL		dB(A)	-
OPERATION RANGE		°CDB	-5 TO 48
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	2.0
PIPING CONNECTIONS	LIQUID	MM	ø9.52. (BRAZING)
	GAS	MM	ø19.05 (BRAZING)

VRV SYSTEM-P (PRESIDENTIAL SUITE)

FAN COIL UNIT (CEILING CONCEALED)

UNIT DESIGNATION			FCU-P.1 TO FCU-P.5
QUANTITY			5
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	12,100
		BTU/H	48,000
		KW	14.07
POWER CONSUMPTION		KW	0.330
AIRFLOW RATE (H/L)		M^3/MIN	39.0/33.5/28.0
		CFM	1,376/1,812/988
SOUND LEVEL (H/L)		dB(A)	44/42/40
DIMENSION (HxWxD)		MM	1,200 x 360x 650
MACHINE WEIGHT		KG	62
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS	MM	ø15.88
	DRAIN	MM	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

FAN COIL UNIT (CEILING CASSETTE)

UNIT DESIGNATION			FCU-P.6 TO FCU-P.8
QUANTITY			3
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	1.5
		KCAL/H	4,534
		BTU/H	18,000
		KW	5.28
POWER CONSUMPTION		KW	0.032
AIRFLOW RATE (H/L)		M^3/MIN	15.5/14.0/12.0
		CFM	547/494/424
SOUND LEVEL (H/L)		dB(A)	34/33/31
DIMENSION (HxWxD)		MM	950 x 45x 950
MACHINE WEIGHT		KG	15
PIPING CONNECTIONS	LIQUID	MM	ø6.35
	GAS	MM	ø12.7
	DRAIN	MM	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)

UNIT DESIGNATION			ACCU-P.1 TO P.6
QUANTITY			6
POWER SUPPLY			230V / 1PH / 60 HZ
COOLING CAPACITY		TR	4.5
		KCAL/H	12,482
		BTU/H	49,500
		KW	14.5
POWER CONSUMPTION		KW	3.9
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		TWIN BLDC ROTARY x 1
	MOTOR OUTPUT	KW	4.12
AIRFLOW RATE		M^3/MIN	60
DIMENSION (HXWXD)		MM	940 x 998 x 330
MACHINE WEIGHT		KG	76
SOUND LEVEL		dB(A)	-
OPERATION RANGE		°CDB	-5 TO 48
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	2.0
PIPING CONNECTIONS	LIQUID	MM	ø9.52. (BRAZING)
	GAS	MM	ø15.88 (BRAZING)

VRV SYSTEM-U (UTILITY BUILDING)

FAN COIL UNIT (CEILING CASSETTE)

UNIT DESIGNATION			FCU-U.1 TO FCU-U.4
QUANTITY			4
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	12,100
		BTU/H	48,000
		KW	14.07
POWER CONSUMPTION		KW	0.95
AIRFLOW RATE (H/L)		M^3/MIN	29.0/27.0/24.0
		CFM	1,023/952/846
SOUND LEVEL (H/L)		dB(A)	44/42/39
DIMENSION (HxWxD)		MM	840 x 288x 840
MACHINE WEIGHT		KG	18.5
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS	MM	ø15.88
	DRAIN	MM	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

FRESH AIR INTAKE (CONCEALED)

UNIT DESIGNATION			FAI-U.I
QUANTITY			1
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	11,953
		BTU/H	47,400
		KW	14.0
POWER CONSUMPTION		KW	0.220
AIRFLOW RATE (H/L)		M^3/MIN	18
		CFM	635
ESP		PA	245
SOUND LEVEL (H/L)		dB(A)	42
DIMENSION (HXWXD)		MM	390 x 1,110 x 650
MACHINE WEIGHT		KG	51
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS	MM	ø15.88
	DRAIN	MM	VP25(EXTERNAL DIA. 32/INTERNAL DIA. 25)
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)

UNIT DESIGNATION			ACCU-U
QUANTITY			1
POWER SUPPLY			380V / 3PH / 60 HZ
COOLING CAPACITY		TR	27.04
		KCAL/H	81,861
		BTU/H	324,632
		KW	95.2
POWER CONSUMPTION		KW	26.15
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		SSC SCROLL X 2
	MOTOR OUTPUT	KW	(6.39 x 2)+(6.39 x 2)
AIRFLOW RATE		M^3/MIN	290+290
DIMENSION (HXWXD)		MM	(1,295 x 1,695 x 765)+(1,295 x 1,695 x 765)
MACHINE WEIGHT		KG	307+307
SOUND LEVEL		dB(A)	66
OPERATION RANGE		°CDB	-5 TO 49
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	8.4+8.4
PIPING CONNECTIONS	LIQUID	MM	ø15.88. (BRAZING)
	GAS	MM	ø28.58 (BRAZING)

VRV SYSTEM-UGH.1 (UPPER GROUND)

FAN COIL UNIT (FLOOR STANDING)

UNIT DESIGNATION			FCU-UGH.1 TO FCU-UGH.3
QUANTITY			3
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	12,000
		BTU/H	47,800
		KW	14.0
POWER CONSUMPTION		KW	0.19
AIRFLOW RATE (H/L)		M^3/MIN	32.0/30.5/27.5
		CFM	1,129/1,076/970
SOUND LEVEL (H/L)		dB(A)	54/47
DIMENSION (HxWxD)		MM	610 x 1850 x400
MACHINE WEIGHT		KG	48
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS	MM	ø15.88
	DRAIN	MM	ID 18 HOSE
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)

UNIT DESIGNATION			ACCU-UGH.1
QUANTITY			1
POWER SUPPLY			380V / 3PH / 60 HZ
COOLING CAPACITY		TR	12.8
		KCAL/H	38,695
		BTU/H	153,450
		KW	45
POWER CONSUMPTION		KW	11.4
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		SSC SCROLL X 2
	MOTOR OUTPUT	KW	4.39 X 2
AIRFLOW RATE		M^3/MIN	255
DIMENSION (HXWXD)		MM	1,295 x 1,795 765
MACHINE WEIGHT		KG	269
SOUND LEVEL		dB(A)	63
OPERATION RANGE		°CDB	-5 TO 48
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	7.7
PIPING CONNECTIONS	LIQUID	MM	ø12.7 (BRAZING)
	GAS	MM	ø28.58 (BRAZING)

VRV SYSTEM-UGI.1 (UPPER GROUND)

FAN COIL UNIT (FLOOR STANDING)

UNIT DESIGNATION			FCU-UGI.1 TO FCU-UGI.4
QUANTITY			4
POWER SUPPLY			230V / 1PH / 60HZ
COOLING CAPACITY		TR	4.0
		KCAL/H	12,000
		BTU/H	47,800
		KW	14.0
POWER CONSUMPTION		KW	0.19
AIRFLOW RATE (H/L)		M^3/MIN	32.0/30.5/27.5
		CFM	1,129/1,076/970
SOUND LEVEL (H/L)		dB(A)	54/47
DIMENSION (HxWxD)		MM	610 x 1850 x400
MACHINE WEIGHT		KG	48
PIPING CONNECTIONS	LIQUID	MM	ø9.52
	GAS	MM	ø15.88
	DRAIN	MM	ID 18 HOSE
REMARKS			UNIT IS SAMSUNG BRAND

AIR COOLED CONDENSING UNIT (ACCU)

UNIT DESIGNATION			ACCU-UGI.1
QUANTITY			1
POWER SUPPLY			380V / 3PH / 60 HZ
COOLING CAPACITY		TR	12.8
		KCAL/H	38,695
		BTU/H	153,450
		KW	45
POWER CONSUMPTION		KW	11.4
POWER CONTROL		%	4-100
COMPRESSOR	TYPE		SSC SCROLL X 2
	MOTOR OUTPUT	KW	4.39 X 2
AIRFLOW RATE		M^3/MIN	255
DIMENSION (HXWXD)		MM	1,295 x 1,795 765
MACHINE WEIGHT		KG	269
SOUND LEVEL		dB(A)	63
OPERATION RANGE		°CDB	-5 TO 48
REFRIGERANT	TYPE		R-410A
	CHARGE	KG	7.7
PIPING CONNECTIONS	LIQUID	MM	ø12.7 (BRAZING)
	GAS	MM	ø28.58 (BRAZING)

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.
The Design Consultant shall be held fully responsible for the failure of the facilities/structures due to faulty design except for the changes made without the conformity of the Design Consultants.

GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE NTS

N

OWNER: NGAC PHASE I JV COMPANY
BCDA AND MTD Clark, Inc.
VIVENCIO B. DIZON, PRESIDENT
PATRICK NICHOLAS P. DAVID, PRESIDENT

PREPARED BY:
Hilmarc's Construction Corporation
1835 E. Rodriguez Sr. Avenue, Cubao, Quezon City
JESUS V. HERBAS, PROJECT MANAGER

REVIEWED AND VALIDATED BY:
FILIPINAS DRAVO CORPORATION
Architectural & Engineering Consultants
ALFREDO R. REVILLA, PROJECT MANAGER

SUBMITTED BY:
BANDAR HEBAT BUILDERS, INC.
ISAAC S. DAVID, PRESIDENT

CERTIFIED BY: INDEPENDENT CONSULTANT
TCGI ENGINEERS
VIRGILIO A. MADRAZO, PRESIDENT/CEO

PROJECT TITLE:
AS-BUILT DRAWING
NGAC PHASE 1A
AQUATIC CENTER
NEW CLARK CITY, CAPAS, TARLAC

SHEET CONTENTS: EQUIPMENT SCHEDULE 2

SHEET NO. M1-02

EQUIPMENT SCHEDULE3

DIRECT EXPANSION SYSTEM - MDF, TELCO & FCC AREA

FAN COIL UNIT (WALL MOUNTED)				
UNIT DESIGNATION			FCU-MDF.1, FCU-MDF.2, FCU-TEL.1 & FCU-TEL.2	FCU-FCC.1 & FCU-FCC.2
QUANTITY			4	2
POWER SUPPLY			230V / 1PH / 60HZ	230V / 1PH / 60HZ
COOLING CAPACITY		TR	1.0	2.0
		KCAL/H	3000	5,850
		BTU/H	11,900	23,200
		KW	3.5	6.8
INDOOR UNIT				
POWER CONSUMPTION		KW	0.050	0.060
AIRFLOW RATE (H)		M³/MIN	10.10/9.0/7.9	17.8/14.3/10.6
		CFM	356/318/279	628/504/374
SOUND LEVEL (H/L/SL)		dB(A)	37/34/30/23	44/39/35/27
DIMENSION (HXWXD)		MM	285 x 820 x 215	1065 X298 X 230
MACHINE WEIGHT		KG	8.0	11.5
OUTDOOR UNIT				
COMPRESSOR	TYPE		TWIN BLDC ROTARY	TWIN BLDC ROTARY
	MOTOR OUTPUT	W	4,454	7.766
REFRIGERANT	TYPE		R410A	R410A
	CHARGE	KG	1.3	2.8
SOUND PRESSURE LEVELS	H/SL	DB (A)	45	48
DIMENSIONS	H X W X D	MM	790 X 548 X 285	880 X 798 X 310
MACHINE WEIGHT		KG	37.9	65
OPERATION RANGE		°CDB	-5 TO 46	-5 TO 46
PIPING CONNECTIONS	LIQUID	MM	ø6.35 X 2	ø6.35 X 2
	GAS		ø9.52 X 2	ø9.52 x 2 + 12.7 x 1
	DRAIN		–	–
MAX. PIPING LENGTH		M	30	70
MAX. LEVEL DIFFERENCE		M	15	15
REMARKS			UNIT IS SAMSUNG BRAND	UNIT IS SAMSUNG BRAND

EXHAUST FAN (EF)										
UNIT DESIGNATION		EF-LG.2	EF-LG.7, EF-LG.8	EF-LG.5	EF- LG.6	EF-LG.1	EF-UG.1, EF-UG.2	EF-LG.4	EF-LG.3	EF-B.1, EF-B.2
QUANTITY		1	2	1	1	1	2	1	1	2
POWER SUPPLY		230V / 1PH / 60HZ	230V / 1PH / 60HZ	230V / 1PH / 60HZ	230V / 1PH / 60HZ	230V / 1PH / 60HZ	230V / 1PH / 60HZ	230V / 1PH / 60HZ	230V / 1PH / 60HZ	380V / 3PH / 60HZ
FAN TYPE		CENTRIFUGAL FAN IN LINE CABINET	CENTRIFUGAL FAN IN LINE CABINET	CENTRIFUGAL FAN IN LINE CABINET	CENTRIFUGAL FAN IN LINE CABINET	CENTRIFUGAL FAN IN LINE CABINET	CENTRIFUGAL FAN IN LINE CABINET	CENTRIFUGAL FAN IN LINE CABINET	CENTRIFUGAL FAN IN LINE CABINET	CENTRIFUGAL FAN IN LINE TUBULAR
OPERATING CONDITIONS		DUCTED	DUCTED	DUCTED	DUCTED	DUCTED	DUCTED	DUCTED	DUCTED	DUCTED
AIF VOLUME	CFM	1,450	730	1,380	1,470	890	1800	2,210	2,380	11,100
STATIC PRESSURE	Pa	315	315	315	315	315	315	315	315	315
VELOCITY PRESSURE	Pa	25.2	6.39	22.8	25.9	9.50	38.9	34.4	43.8	26
TOTAL PRESSURE	Pa	340	321	338	341	325	5354	349	39	341
OUTLET VELOCITY	M/S	6.58	3.31	6.26	6.67	4.04	8.17	7.69	8.67	6.67
FAN TOTAL EFFICIENCY		64%	61.9%	64.6%	63.8%	64.3%	60	64%	61.4	65.6%
FAN STATIC EFFICIENCY		59.2%	60.6%	60.3%	58.9%	62.4%	53.4%	57.7 %	53.9	55.8
FAN SPEED	RPM	2105	1776	1750	2116	1835	2318	1978	2102	888
AIR TEMPERATURE	°C	30	30	30	30	30	30	30	30	30
ALTITUDE	M	1	1	1	1	1	1	1	1	1
FAN ABSORBED POWER	KW	0.364	0.179	0.341	0.371	4.97	0.501	0.544	0.657	2.67
MOTOR POWER		D80(0.550KW)	D80(0.550KW)	D80(0.550KW)	D80(0.550KW)	D80(0.550KW)	D80(0.750KW)	D80(0.75KW)	D90(1.10KW)	D132M(5.50KW)
MOTOR SPEED	RPM	3480	1740	1740	3480	1740	3480	1740	3500	2501
REMARKS		UNIT IS KRUGGER BRAND	UNIT IS KRUGGER BRAND	UNIT IS KRUGGER BRAND	UNIT IS KRUGGER BRAND	UNIT IS KRUGGER BRAND	250UNIT IS KRUGGER BRAND	UNIT IS KRUGGER BRAND	UNIT IS KRUGGER BRAND	UNIT IS KRUGGER BRAND

EXHAUST FAN (EF) – EE ROOM & UTILITY BUILDING : TOILET EXHAUST FAN (TEF) – PRESIDENTIAL SUITE

UNIT DESIGNATION	TEF-U	TEF-P.1 & TEF-P.2	EF-EE	EF-U.5 & EF-U.6	EF-U.3 & EF-U4	EF-U.7 & EF-U.8	EF-U.9	EF-U.1 & EF-U.2
QUANTITY	1	2	2	2	2	2	1	2
LOCATION	DRY LAND TOILET AREA	TOILET AREA	EE ROOM	METERING VAULT	LVSG ROOM	GENSET ROOM	EQUIPMENT ROOM	TRANSFORMER ROOM
POWER SUPPLY	220V / 1PH / 60HZ	220V / 1PH / 60HZ	220V / 1PH / 60HZ	220V / 1PH / 60HZ	220V / 1PH / 60HZ	220V / 1PH / 60HZ	220V / 1PH / 60HZ	220V / 1PH / 60HZ
AIR VOLUME (CFM)	80	159	260	1,224	1,730	5,539	5,539	10,350
EXTERNAL STATIC PRESSURE (Pa)	40	40	40	20	20	20	20	20
TYPE	WALL MOUNTED	CEILING CASSETTE	CEILING CASSETTE	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED
CONSUMPTION (Kw)	0.033	0.033	0.061	0.080	0127	0.361	0.361	0.912
FAN SPEED (R.P.M)	570	570	540	1,560	1,660	1,150	1,150	1150
NOISE dB(A)	34	34	33	42	48	54	54	54
WEIGHT (Kg)	4.4	4.4	5.6	6.1	10.5	34	34	34
BASIS OF DESIGN	SIMILAR TO KDK OR APPROVED EQUAL							

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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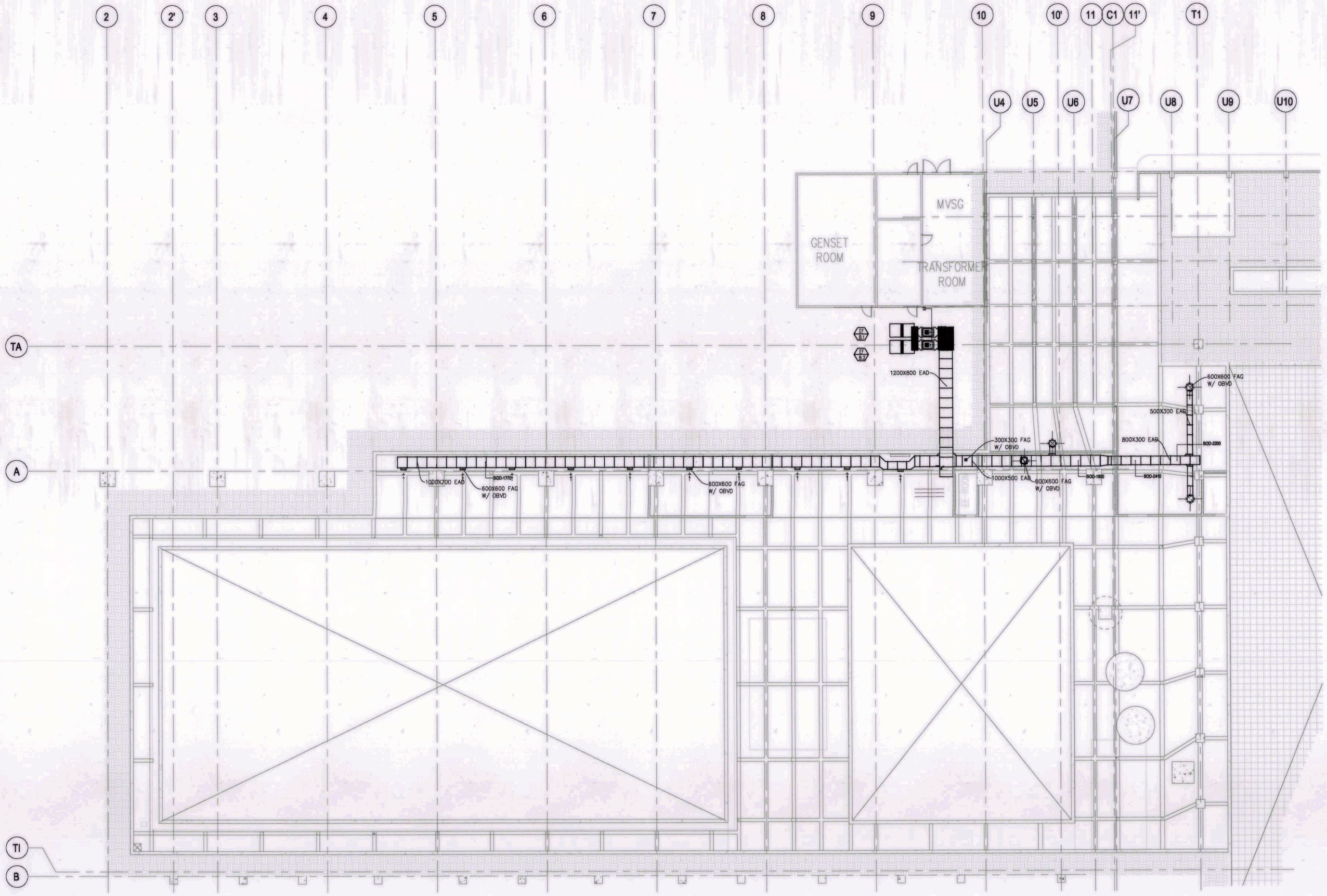
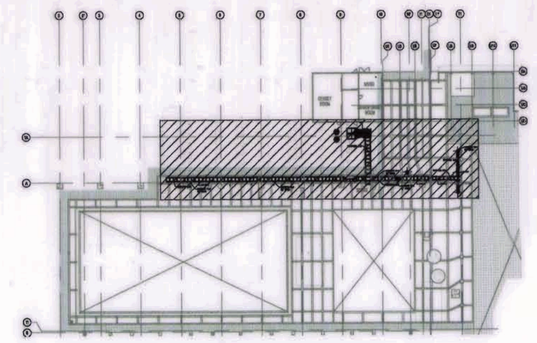
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE NTS

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA Bases Conversion and Development Authority — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	EQUIPMENT SCHEDULE 3	M1-03





KEYPLAN

1 BASEMENT AS-BUILT VENTILATION LAYOUT

M2-01 SCALE: 1:200

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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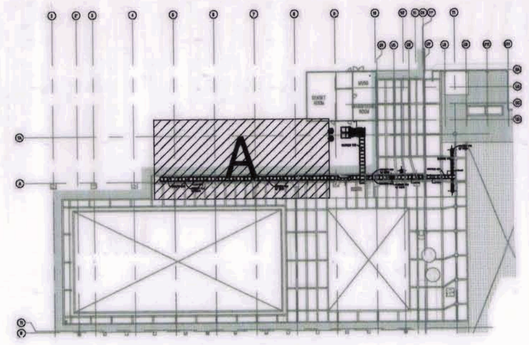
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:200

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	BASEMENT VENTILATION LAYOUT	M2-01



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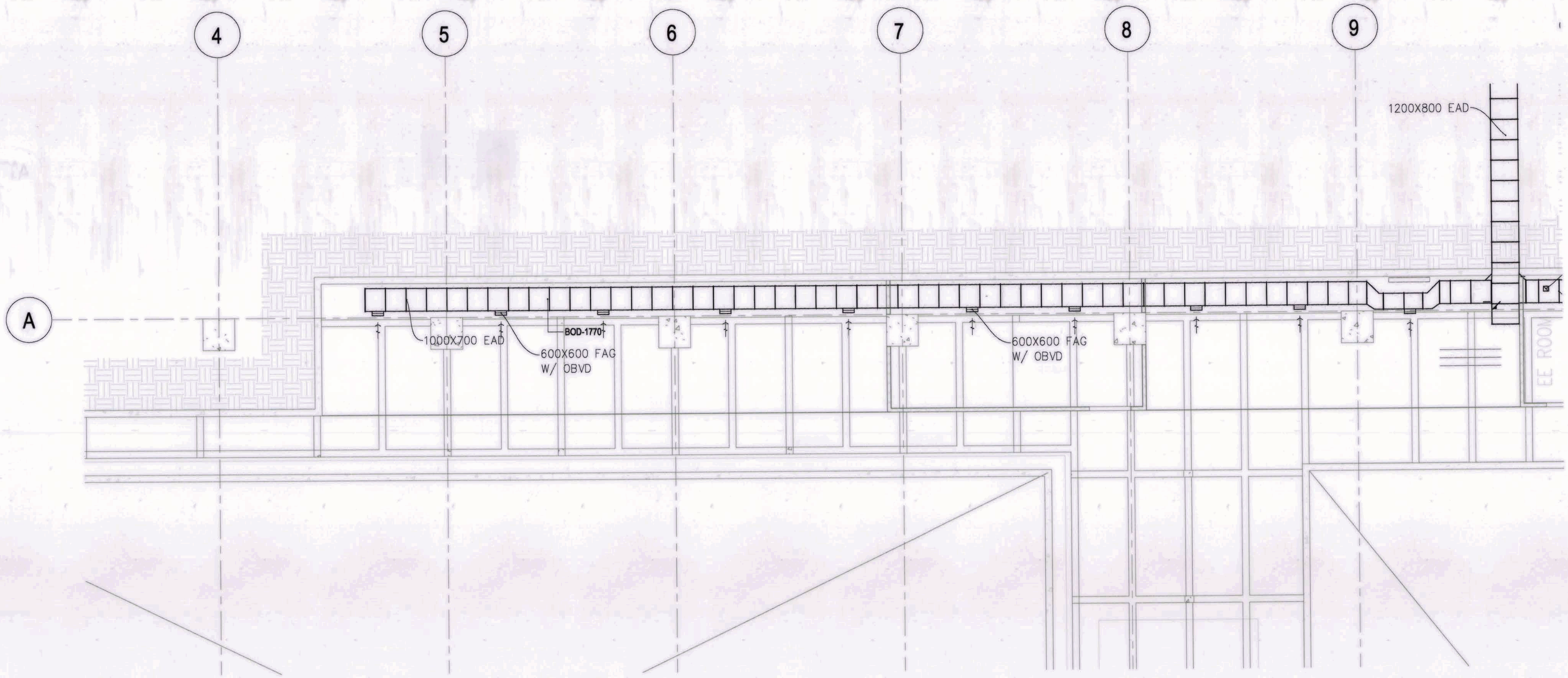

1 / M2-01A

PARTIAL-A
BASEMENT VENTILATION LAYOUT

SCALE: 1:100

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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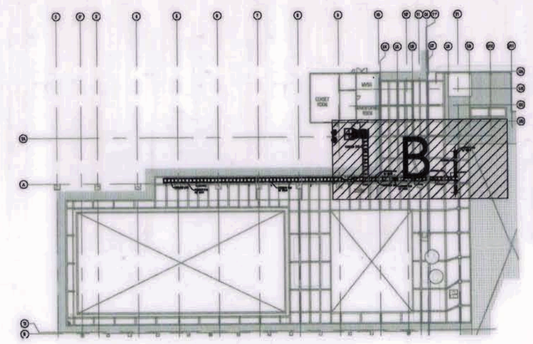
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:100

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation, 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City — JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PARTIAL–A BASEMENT VENTILATION LAYOUT	M2-01A



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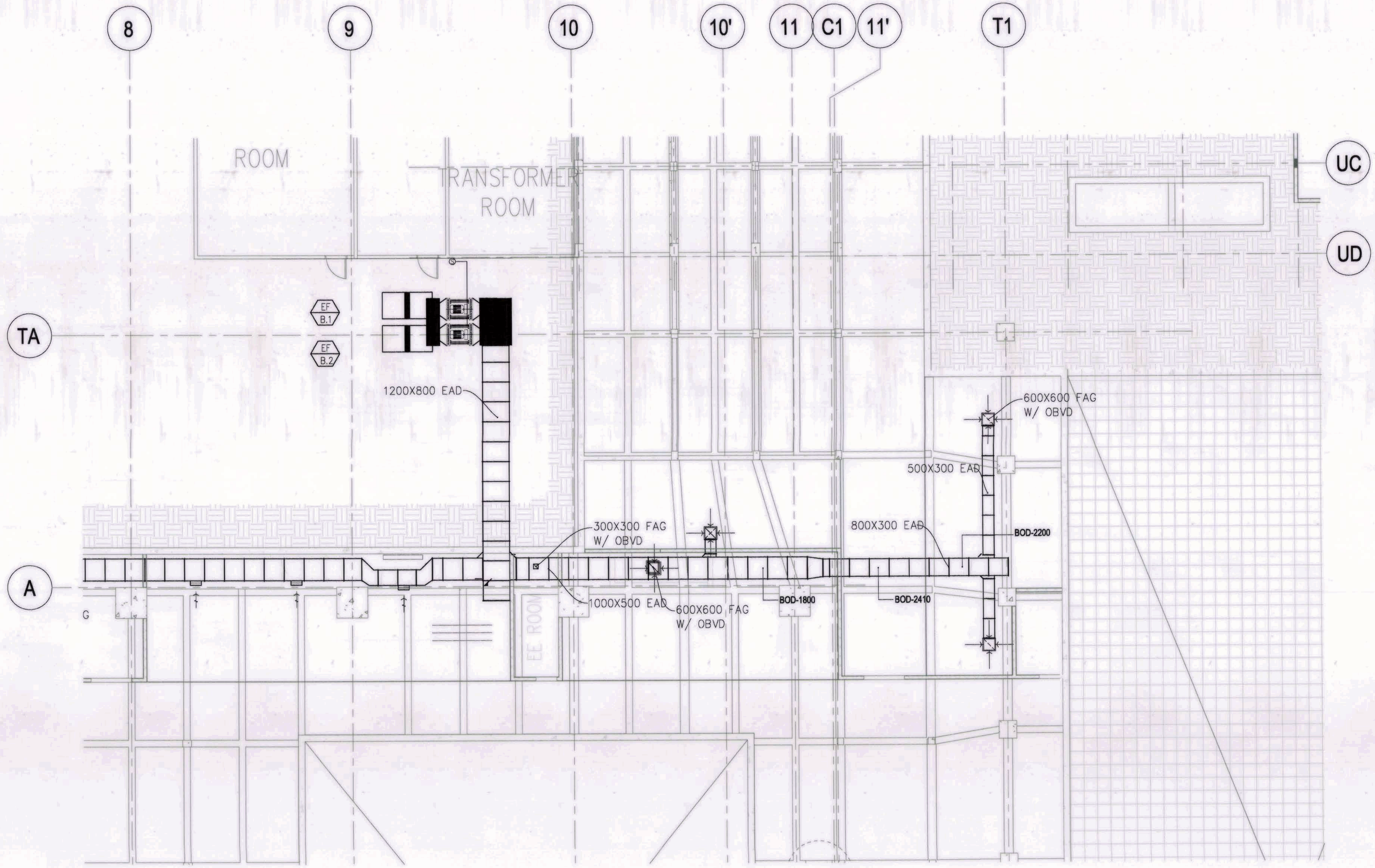


PARTIAL-B
BASEMENT VENTILATION LAYOUT

1
M2-01B

SCALE: 1:100

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

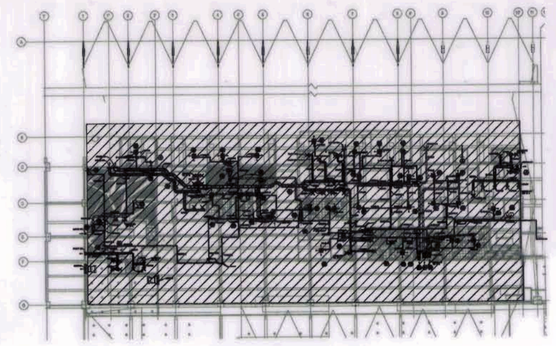
The Design Consultant shall be held fully responsible for the failure of the facilities/structures due to faulty design except for the changes made without the conformity of the Design Consultants.

GRAPHIC SCALE:

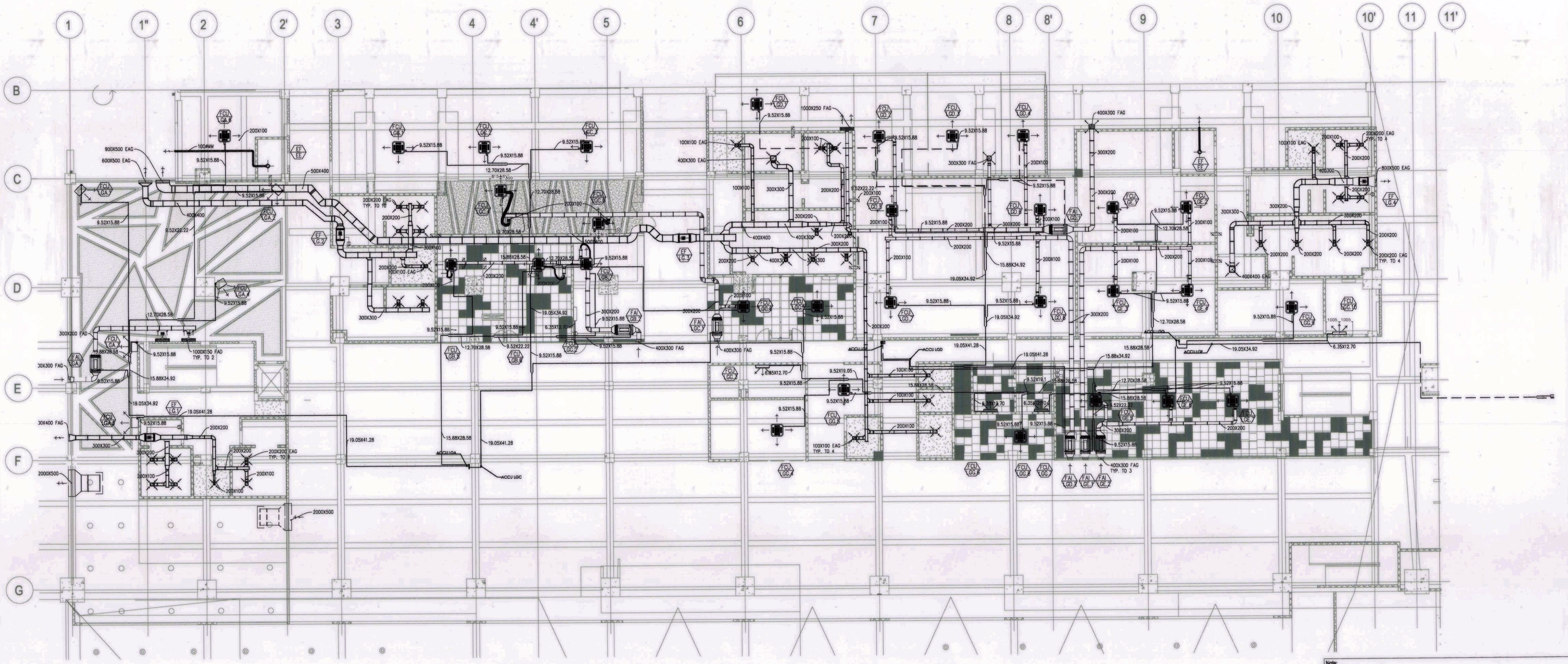
4000 2000 0 4000 10000
SCALE 1:100

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PARTIAL-B BASEMENT VENTILATION LAYOUT	M2-01B



KEYPLAN



1
M2-02

LOWER GROUND FLOOR AC & VENTILATION LAYOUT

SCALE: 1:150

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

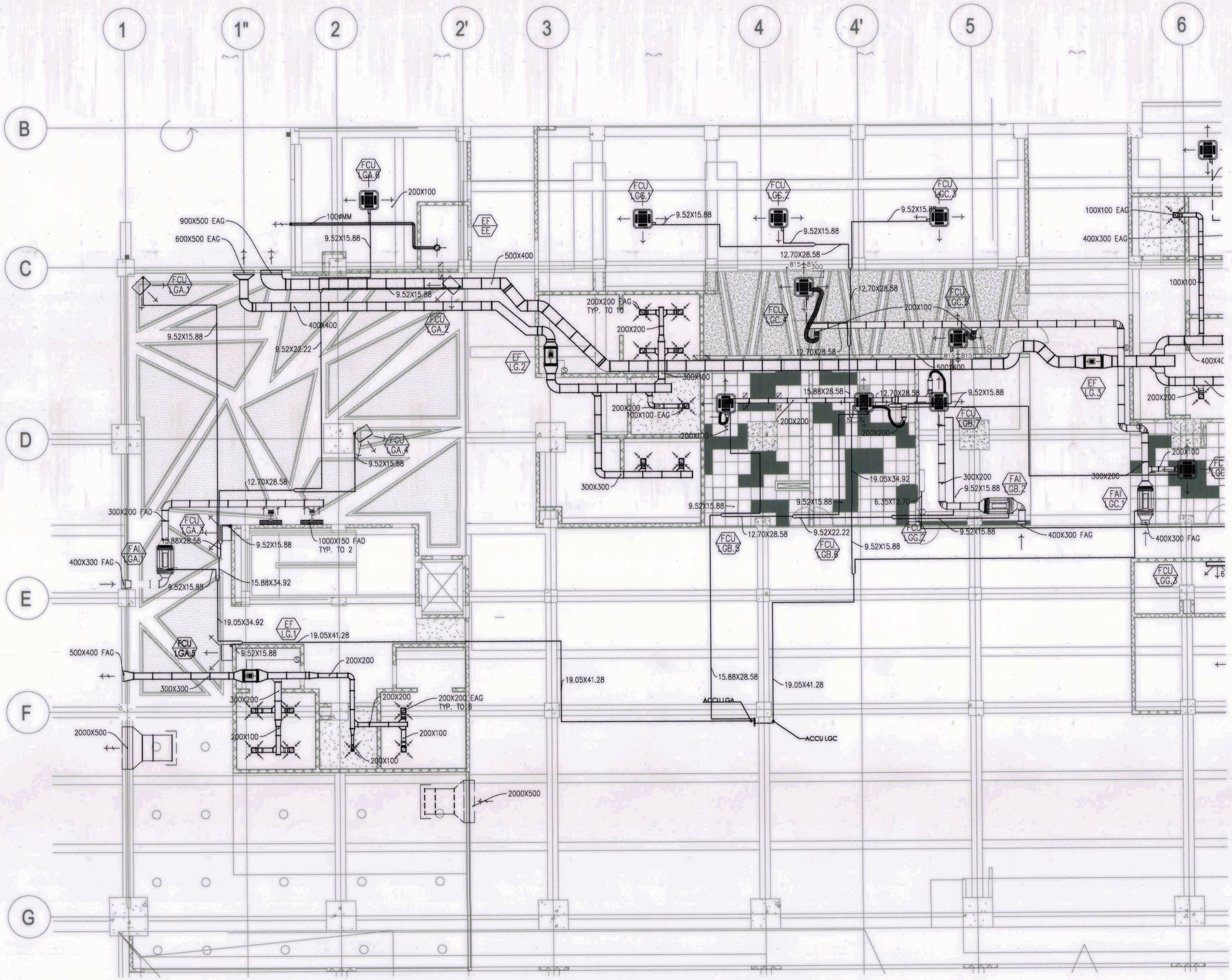
The Design Consultant shall be held fully responsible for the failure of the facilities/structures due to faulty design except for the changes made without the conformity of the Design Consultants.

GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:150

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON PRESIDENT AND MTD Clark, Inc. PATRICK NICHOLAS P. DAVID PRESIDENT	Hilmarç's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 8th Floor Aurora Mitsubishi Bldg. 1045 Aurora Blvd., Quezon City Phone: (632) 421-2571 to 74 Fax: (632) 421-2431 Email : filipinasdravo@yahoo.com Website: www.fild-dravo.com ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS 8th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	LOWER GROUND FLOOR AC & VENTILATION LAYOUT	M2-02



KEYPLAN

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:100

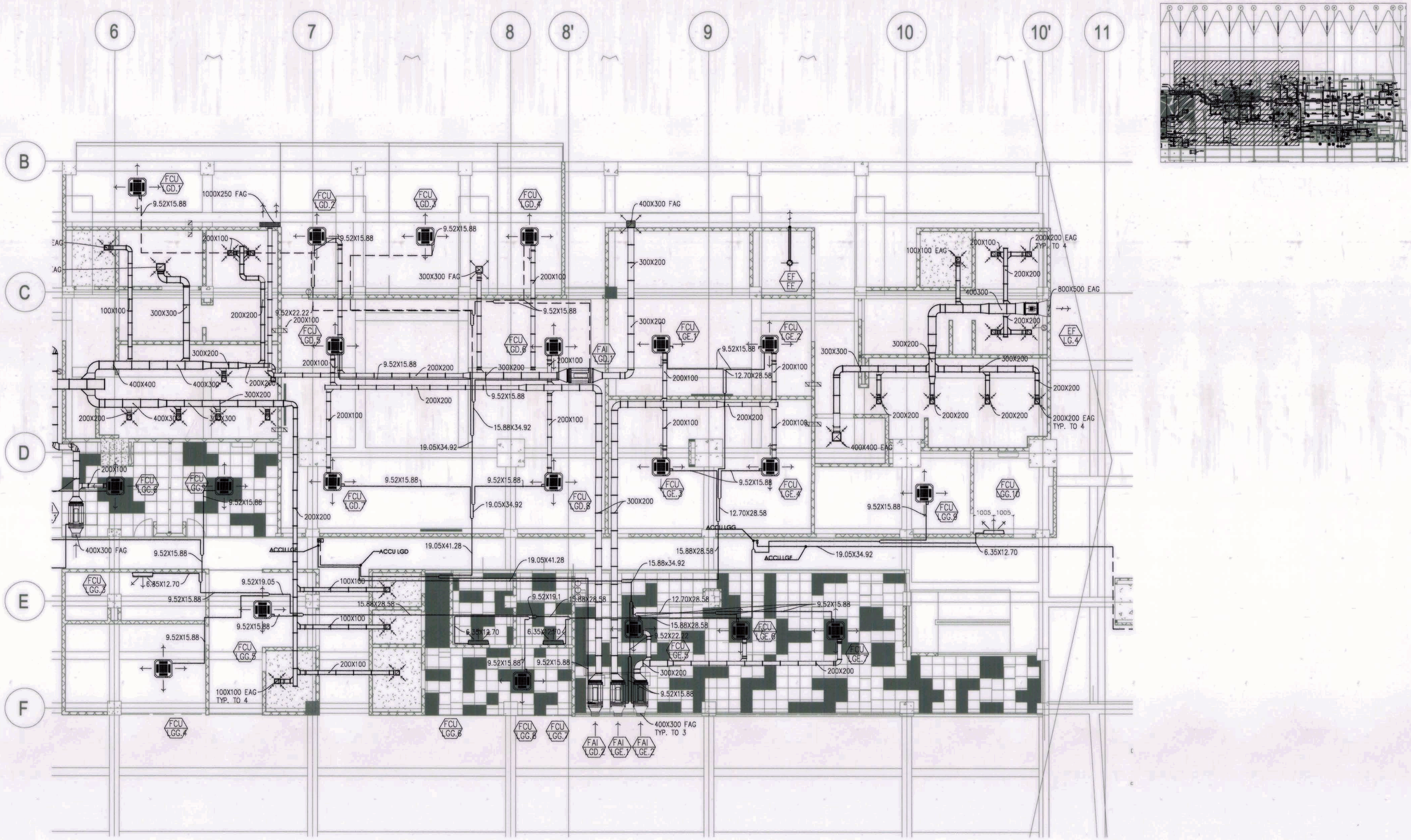
N

PARTIAL-A
LOWER GROUND FLOOR FLOOR AC & VENTILATION LAYOUT

1
M2-02A

SCALE: 1:100

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PARTIAL-A LOWER GROUND FLOOR AC & VENTILATION LAYOUT	M2-02A



PARTIAL-B
LOWER GROUND FLOOR AC & VENTILATION LAYOUT

1
M2-02B

SCALE: 1:100

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

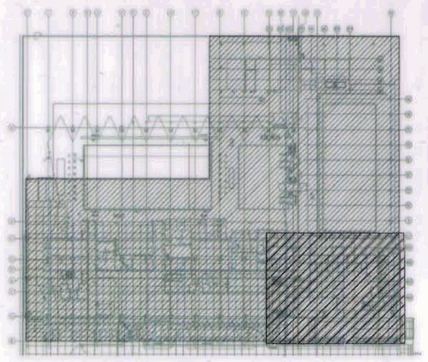
The Design Consultant shall be held fully responsible for the failure of the facilities/structures due to faulty design except for the changes made without the conformity of the Design Consultants.

GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:100

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON PRESIDENT AND MTD Clark, Inc. PATRICK NICHOLAS P. DAVID PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora-Milestone Bldg. 1045 Aurora Blvd. Quezon City Philippines Tel. (632)-421-2371 to 74 Fax. (632) 421-2431 Email : filidravo@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS 8th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines • Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PARTIAL-B LOWER GROUND FLOOR AC & VENTILATION LAYOUT	M2-02B



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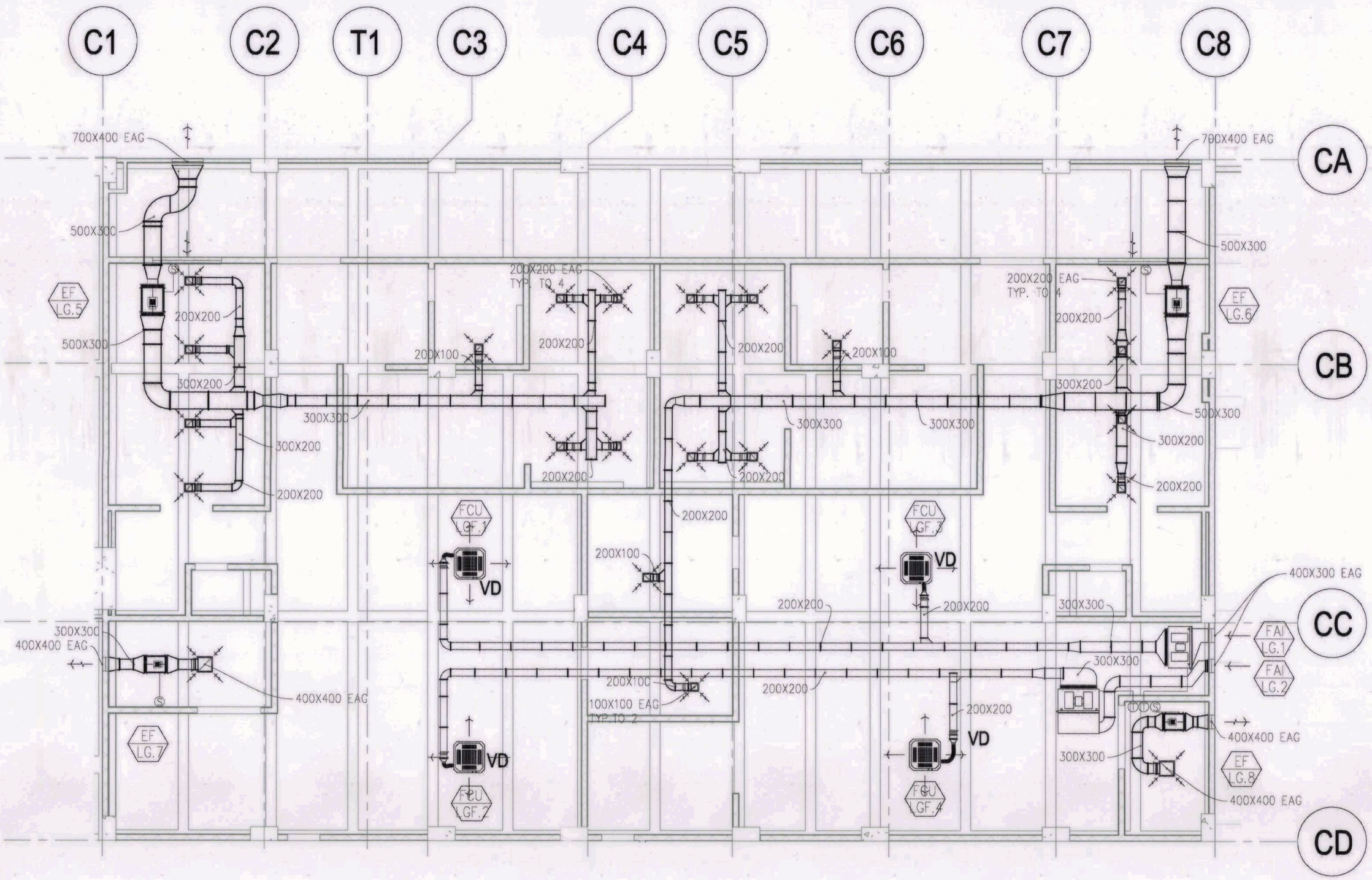


1
M2-02C

PARTIAL-C
LOWER GROUND FLOOR AC & VENTILATION LAYOUT

SCALE: 1:75

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

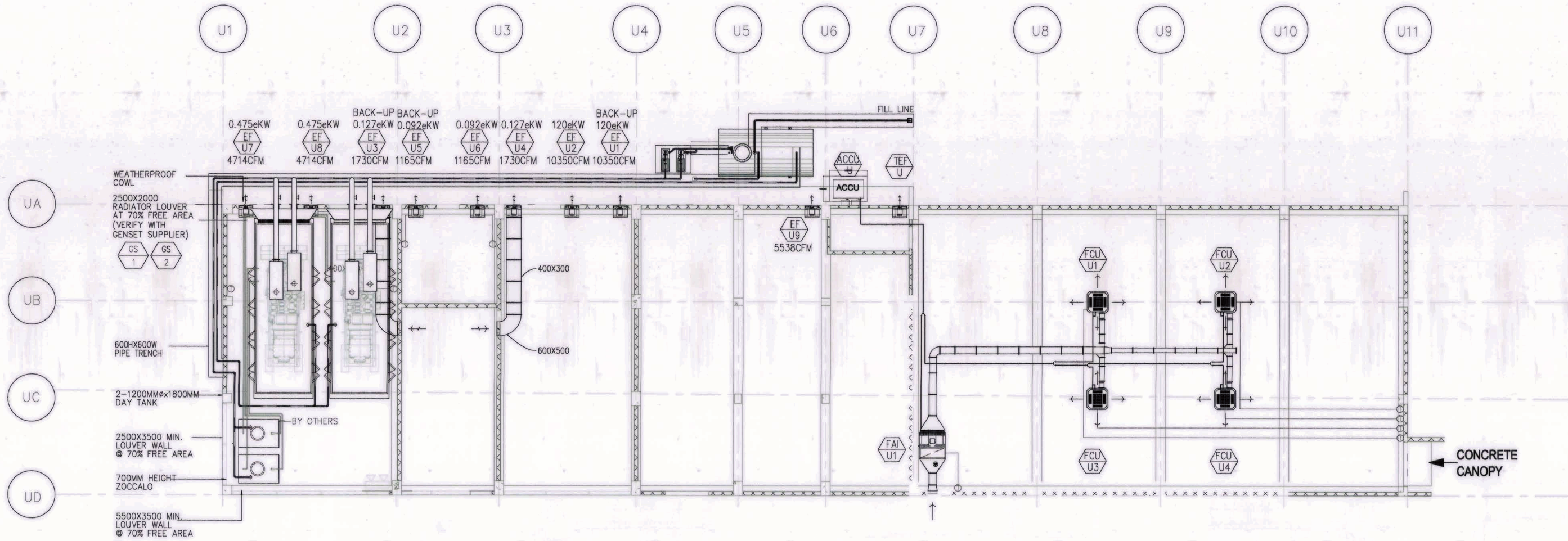
The Design Consultant shall be held fully responsible for the failure of the facilities/structures due to faulty design except for the changes made without the conformity of the Design Consultants.

GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:75

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON PRESIDENT AND MTD Clark, Inc. PATRICK NICHOLAS P. DAVID PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Marksplace Bldg. 1045 Aurora Blvd. Quezon City Philippines 111 Tel. (632) 725-2571 to 74 Fax. (632) 721-2437 Email : filidravo@info.com.ph website: www.filidravo.com ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS 9th Flr. Felize Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 18 VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PARTIAL-C LOWER GROUND FLOOR AC & VENTILATION LAYOUT	M2-02C



PARTIAL D
UTILITY BUILDING AC & VENTILATION LAYOUT

1 / M2-02D

SCALE: 1:100

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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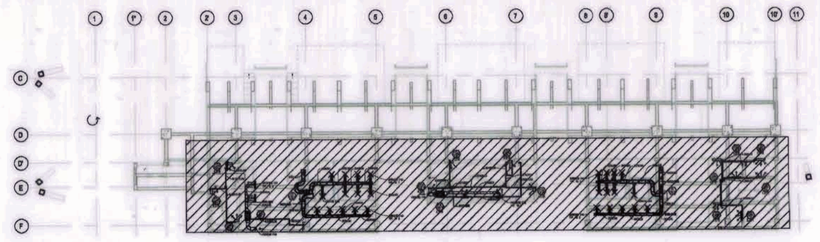
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:100

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PARTIAL D–UTILITY BUILDING AC & VENTILATION LAYOUT	M2-02D



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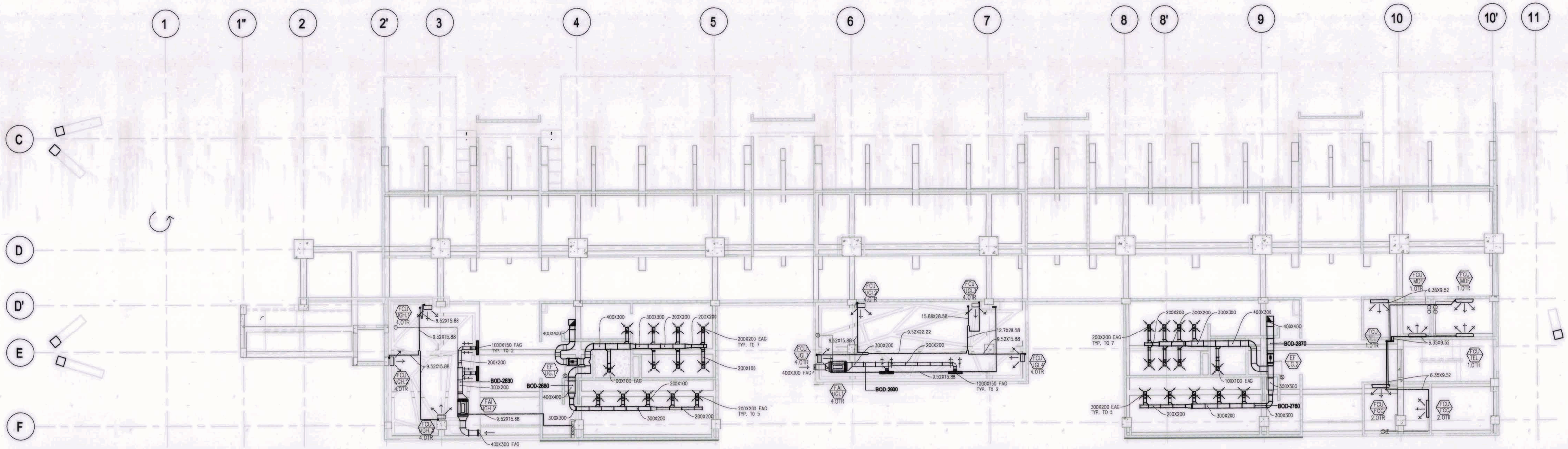

1
M2-03

UPPER GROUND FLOOR AC & VENTILATION LAYOUT

SCALE: 1:150

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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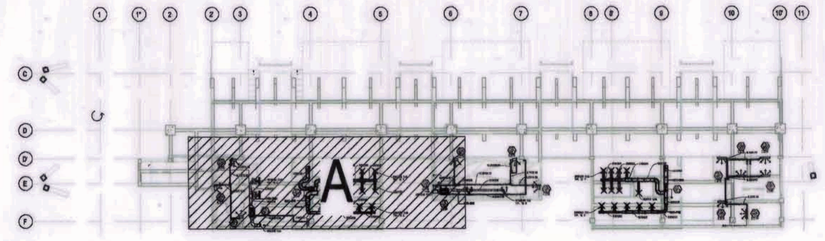
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:150

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	UPPER GROUND FLOOR AC & VENTILATION LAYOUT	M2-03



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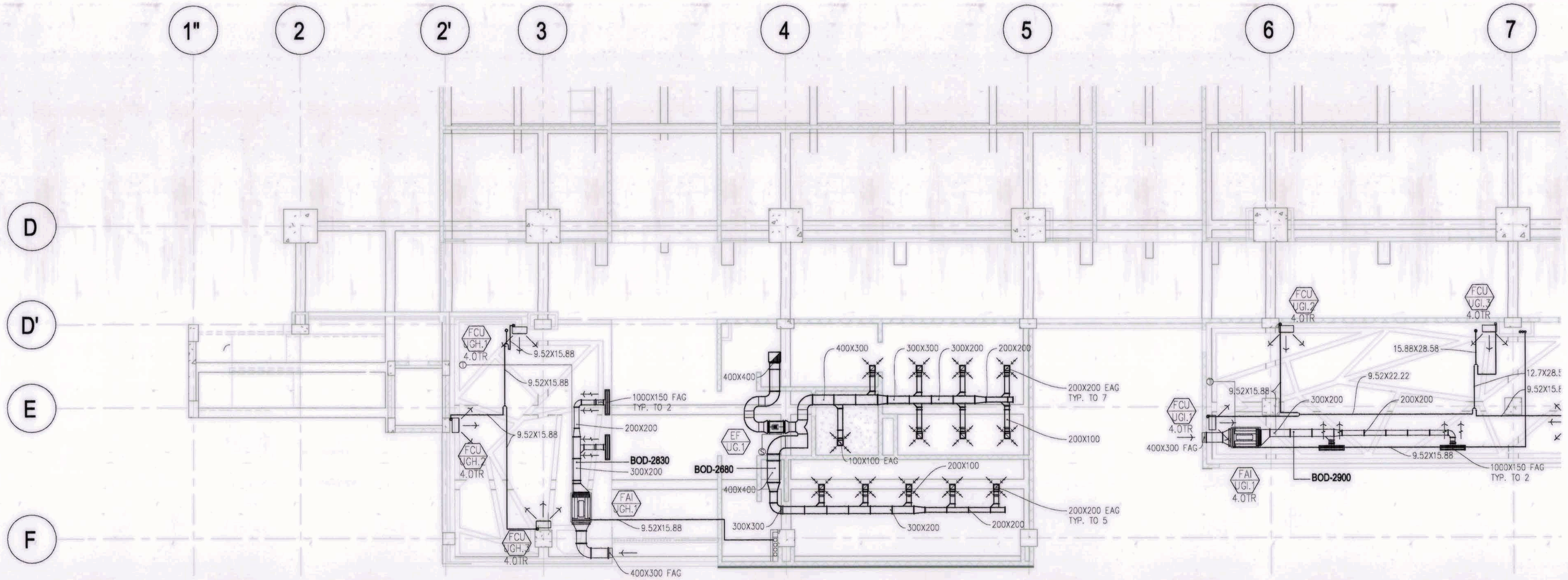

PARTIAL-A
UPPER GROUND FLOOR AC & VENTILATION LAYOUT

1 / M2-03A

SCALE: 1:100

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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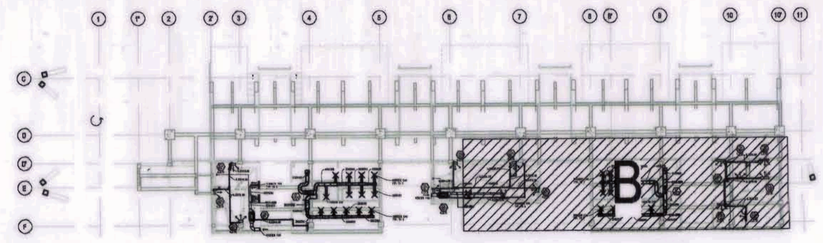
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:100

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation, 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City — JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PARTIAL–A UPPER GROUND FLOOR AC & VENTILATION LAYOUT	M2-03A



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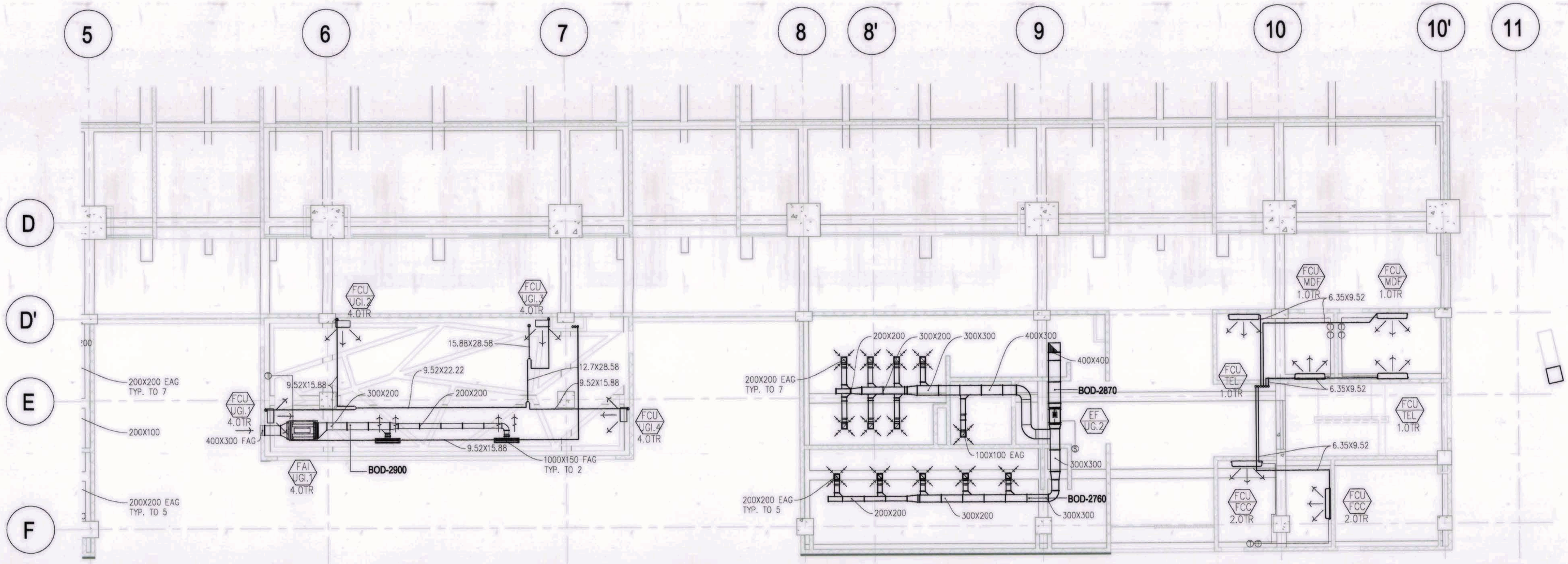

PARTIAL-B
UPPER GROUND FLOOR AC & VENTILATION LAYOUT

1 / M2-03B

SCALE: 1:100

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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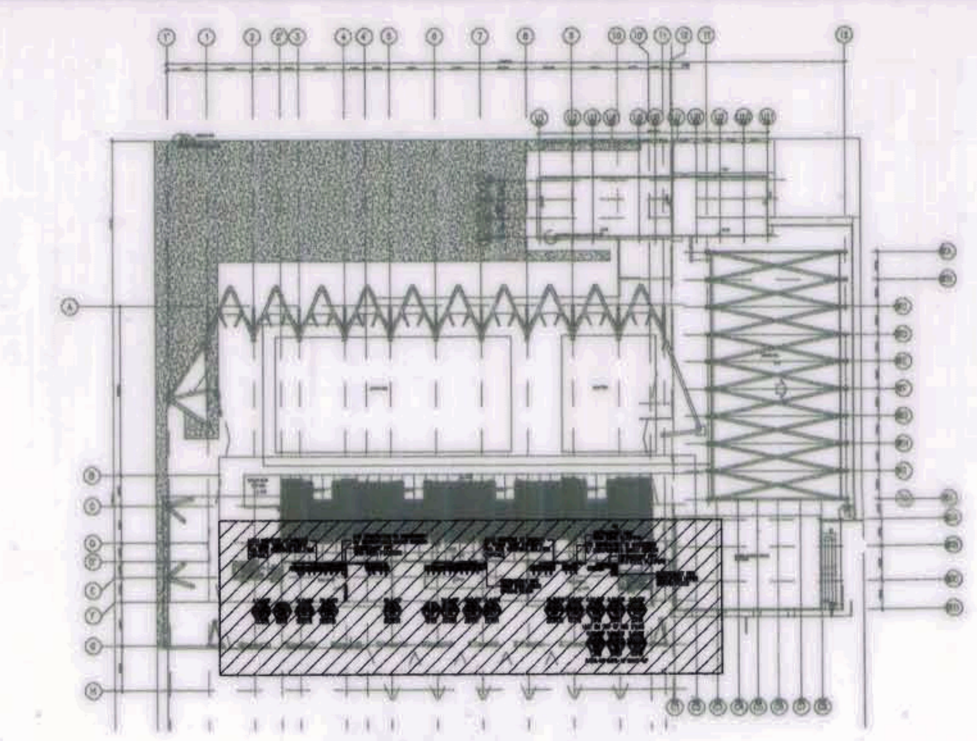
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:100

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON PRESIDENT PATRICK NICHOLAS P. DAVID PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS 9th Flr. Felipe Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines • Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PARTIAL-B UPPER GROUND FLOOR AC & VENTILATION LAYOUT	M2-03B



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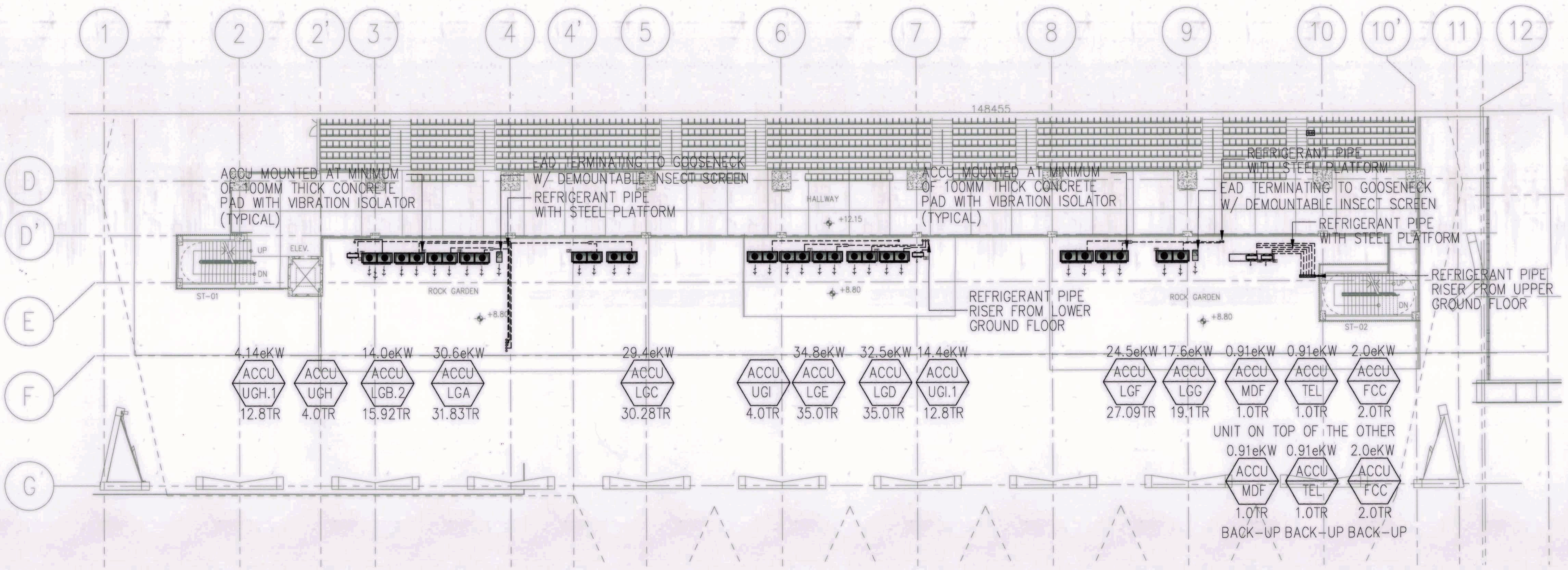

1
M2-04

UPPER BLEACHER AC & VENTILATION LAYOUT

SCALE: 1:150

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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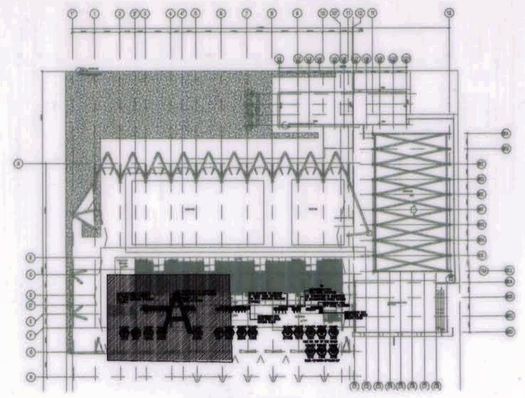
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:150

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS 8th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	UPPER BLEACHER AC & VENTILATION LAYOUT	M2-04



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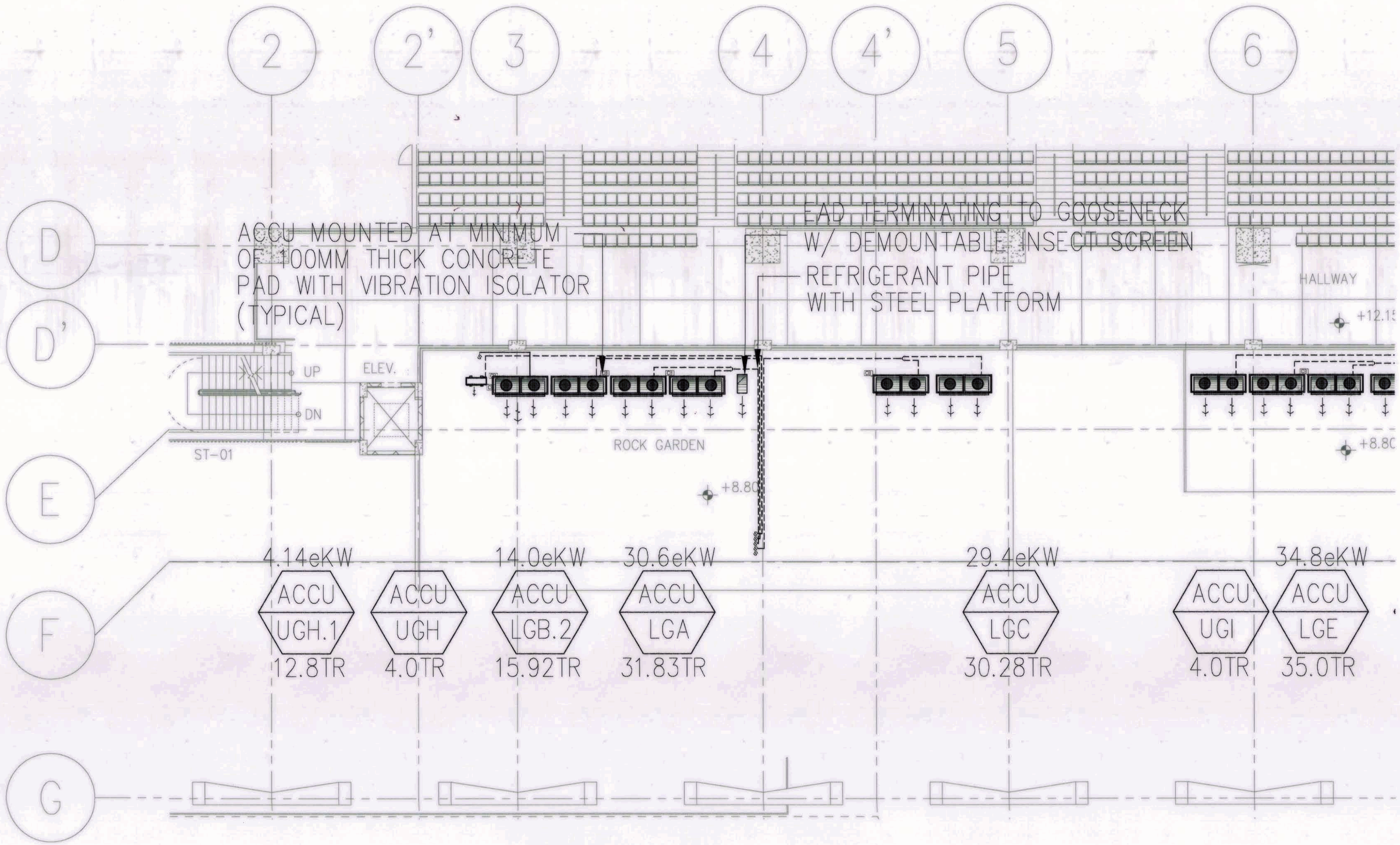

1
M2-04A

PARTIAL-A
UPPER BLEACHER AC & VENTILATION LAYOUT

SCALE: 1:100

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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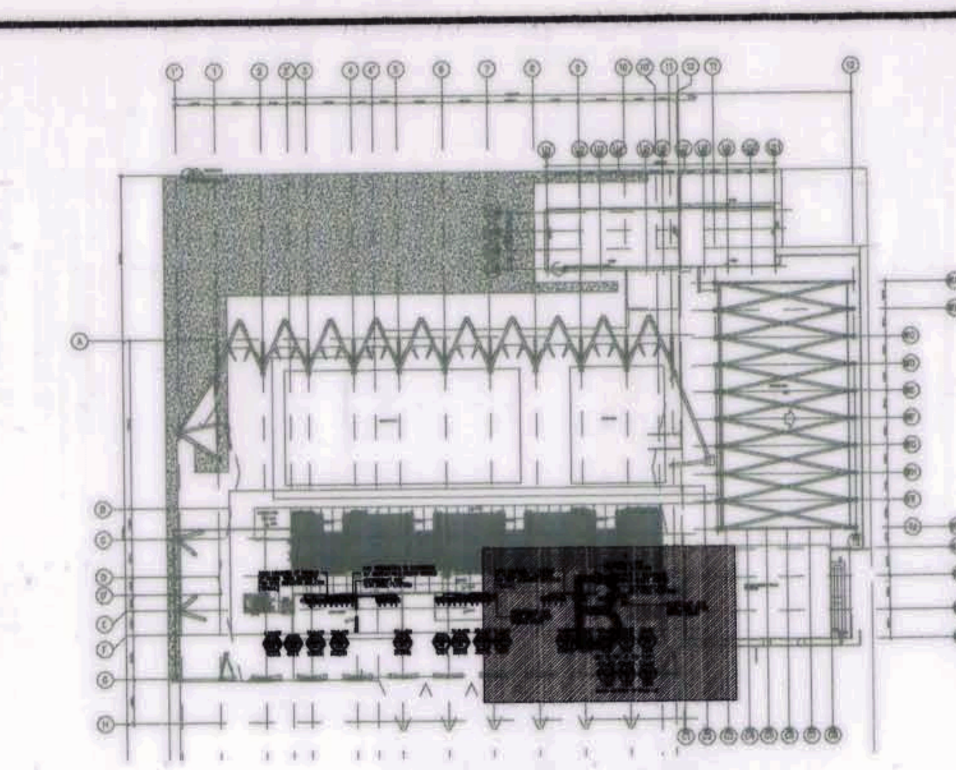
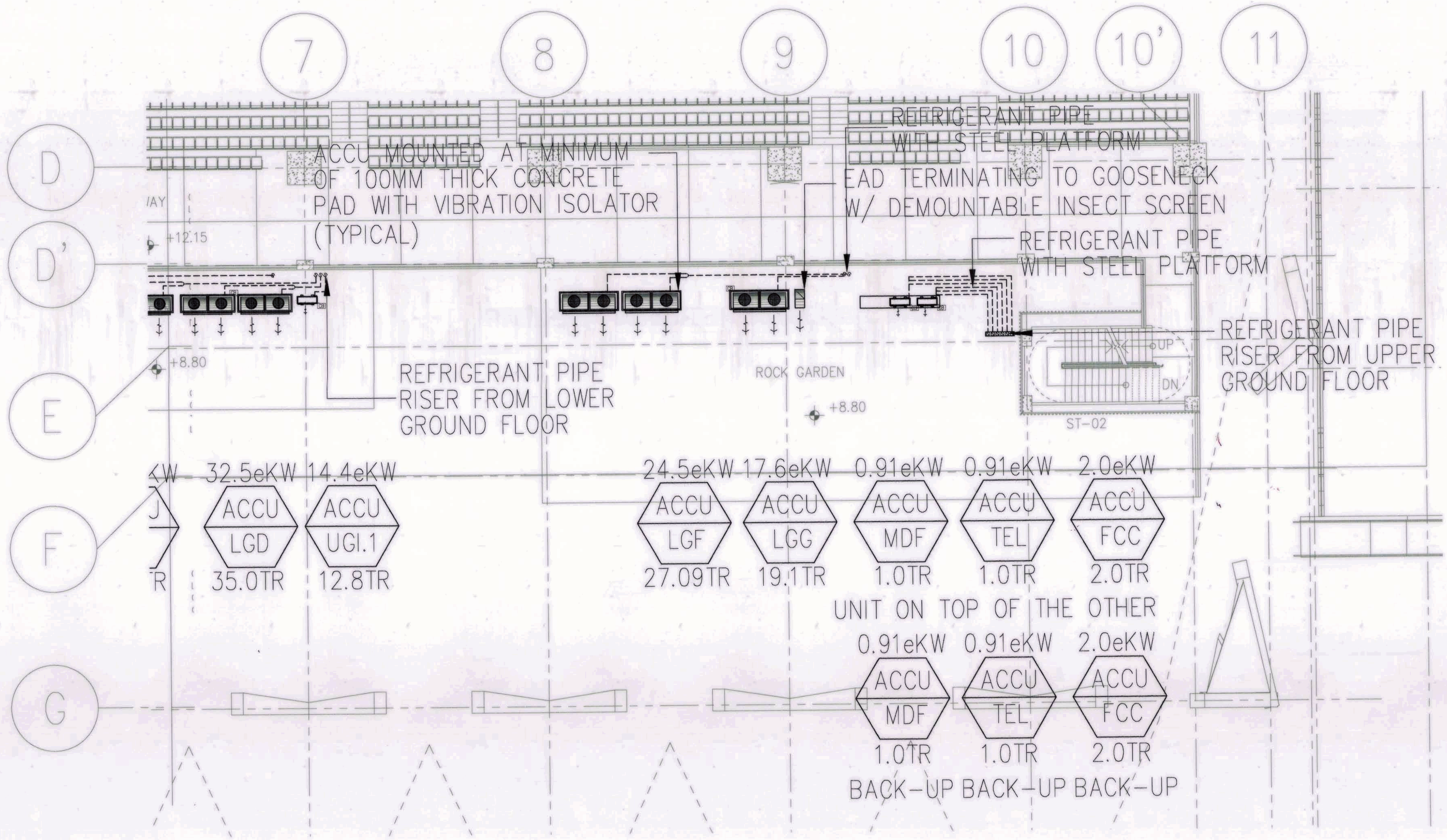
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:100

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND NTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PARTIAL A–UPPER BLEACHER AC & VENTILATION LAYOUT	M2-04A





1 / M2-04B

PARTIAL-B
UPPER BLEACHER AC & VENTILATION LAYOUT

SCALE: 1:100

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.
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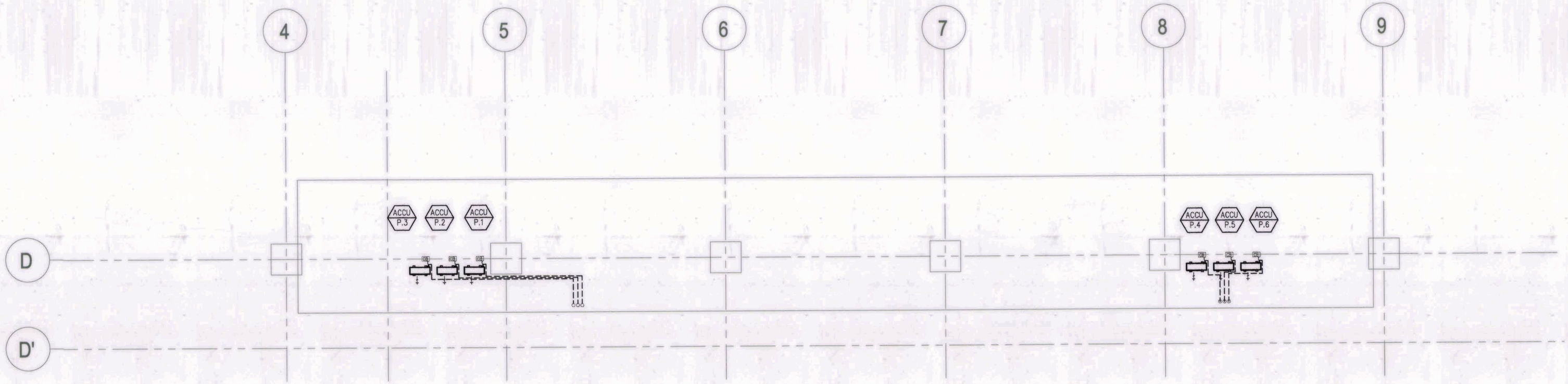
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:100

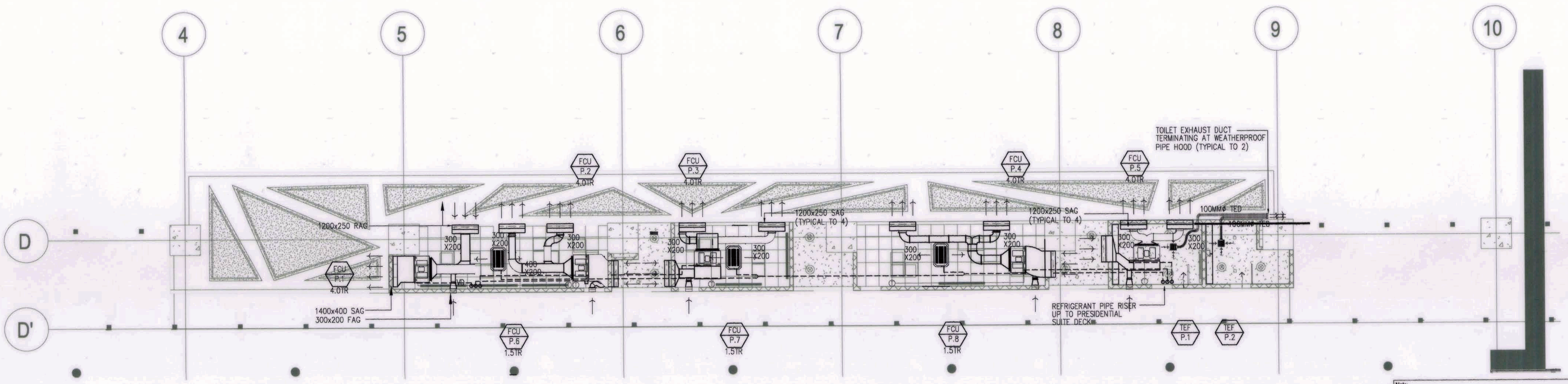
N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PARTIAL B-UPPER BLEACHER AC & VENTILATION LAYOUT	M2-04B



1 / M2-05 **PRESIDENTIAL SUITE ROOFDECK AC & VENTILATION LAYOUT**

SCALE: 1:100



2 / M2-05 **PRESIDENTIAL SUITE AC & VENTILATION LAYOUT**

SCALE: 1:100

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

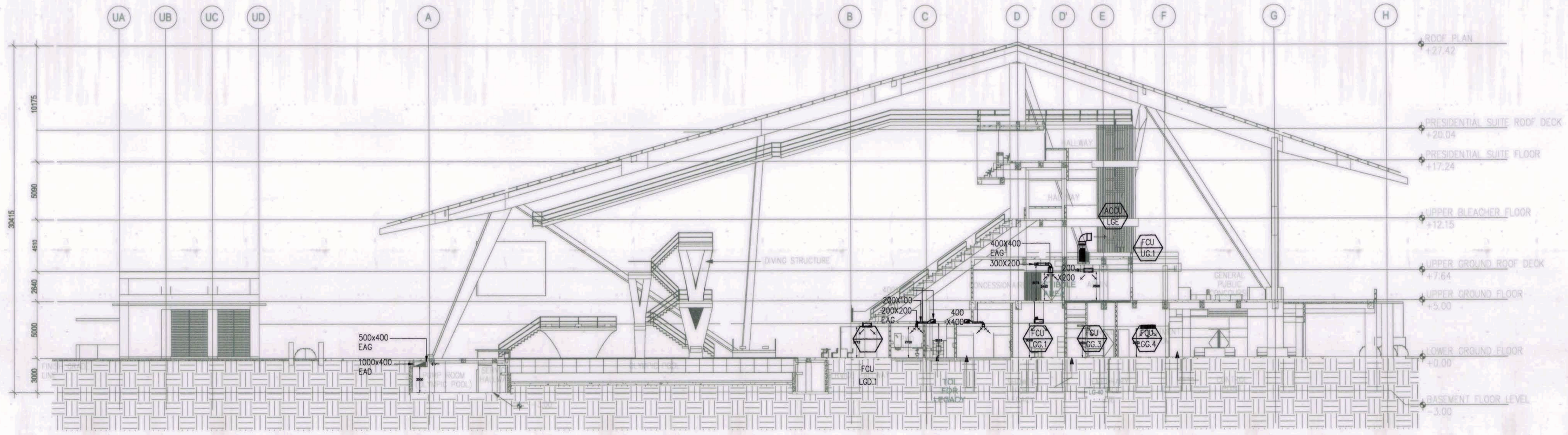
The Design Consultant shall be held fully responsible for the failure of the facilities/structures due to faulty design except for the changes made without the conformity of the Design Consultants.

GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:100

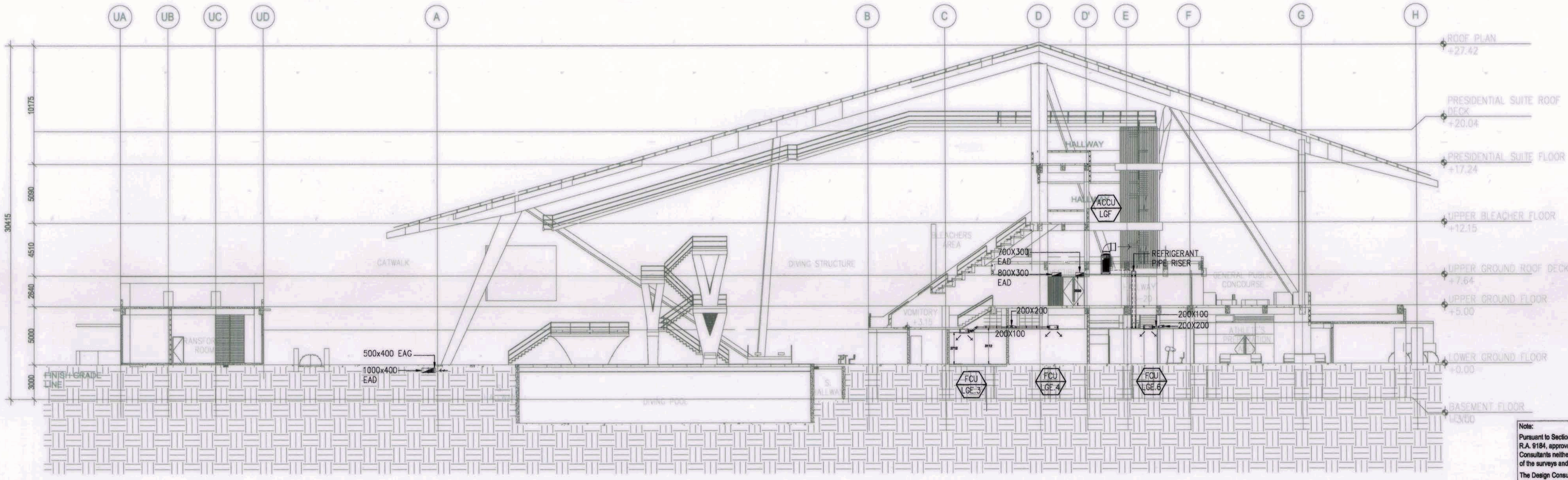
N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PRESIDENTIAL SUITE FLOOR AND DECK AC & VENTILATION LAYOUT	M2-05



1 / M3-01 **CROSS SECTION 1**

SCALE 1:200



2 / M3-01 **CROSS SECTION 2**

SCALE 1:200

Note:
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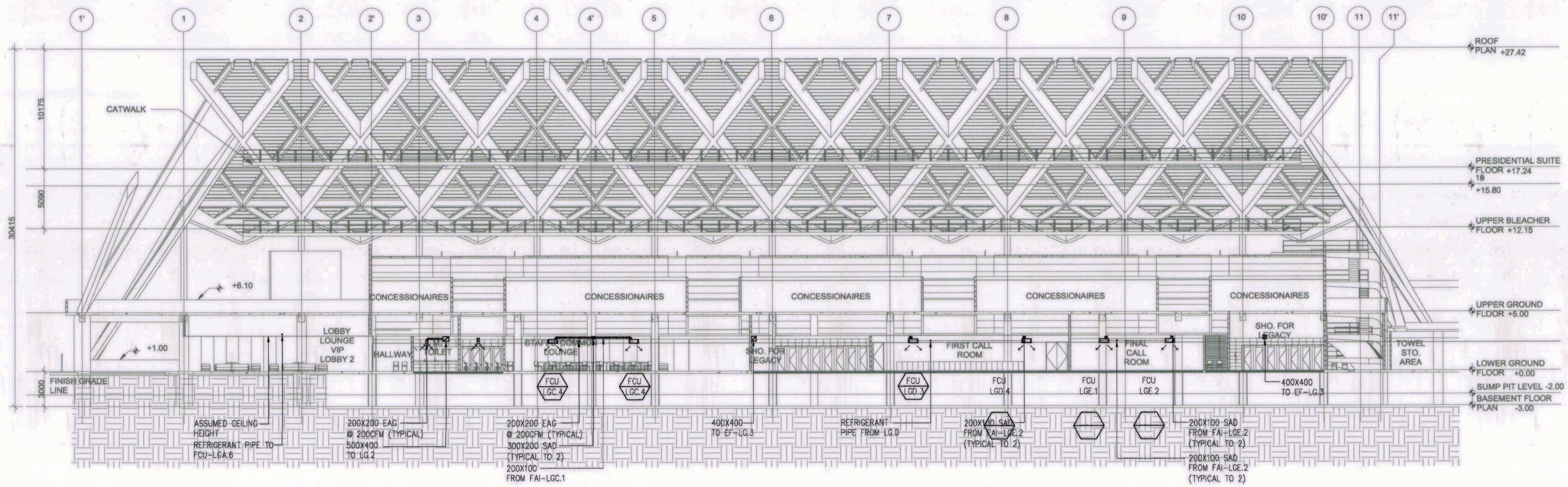
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1: 200

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON PRESIDENT AND NTD Clark Inc. PATRICK NICHOLAS P. DAVID PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	CROSS SECTION	M3-01



LONGITUDINAL SECTION

1 / M3-02 SCALE 1:200

Note:
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GRAPHIC SCALE:
4000 2000 0 4000 10000
SCALE 1:200

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT; PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation, 1835 E. Rodriguez Sr. Avenue, Cubao, Quezon City. JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants. ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS, 9th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines. VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	LONGITUDINAL SECTION	M3-02

DATA FOR FUEL OIL SYSTEM:

GENSET CAPACITY: 2 UNITS OF 1000KVA
(AS PER EE, VERIFY WITH ELECTRICAL PLAN)

FUEL CONSUMPTION PER GENSET: 221.8 $\frac{Li}{hr}$
(AS PER GENSET CATALOG IN LIEU OF DATA FROM EE)

FUEL OIL TANK RESERVED: 24 HOURS
(AS AGREED BY HILMARC'S DURING DCM)

DAY TANK RESERVED: 8 HOURS
(AS PER EE, VERIFY WITH ELECTRICAL PLAN)

FUEL OIL STORAGE TANK SIZING:

$V = 221.8 \frac{Li}{hr} \times 2$ GENSET x 24 HRS. = 10,646.4 Li
$V = 10,646.4$ Li (TOTAL FUEL CONSUMTION)
$V = 10,646.4$ Li x 1.1 (10% AIR GAP)
$V = 11,711.1$ Li ≈ 11.8 M ^{3}

CONSIDERING 2.0M TANK DIAMETER FOR 1 TANK
$V = \frac{\pi}{4} D^2 X L \sim 11.8m^3 = \frac{\pi}{4}(2)^2 X L$

SIZE OF TANK
1 UNIT OF 2.0MØ (DIAMETER) X 4.0M (LENGTH)

DAY TANK SIZING:

$V = 221.8 \frac{Li}{hr} \times 8$ HRS. = 1,774.4 Li
$V = 1,774.4$ Li (FUEL CONSUMTION PER GENSET)
$V = 1,774.4$ Li x 1.1 (10% AIR GAP)
$V = 1,951.8$ Li ≈ 2.0 M ^{3}

CONSIDERING 1.2M DAY TANK
$V = \frac{\pi}{4} D^2 X L \sim 2.0m^3 = \frac{\pi}{4}(1.2^2) X L$

SIZE OF DAY TANK PER GENSET
1.2MØ (DIAMETER) X 1.8M (LENGTH)

LEGEND:

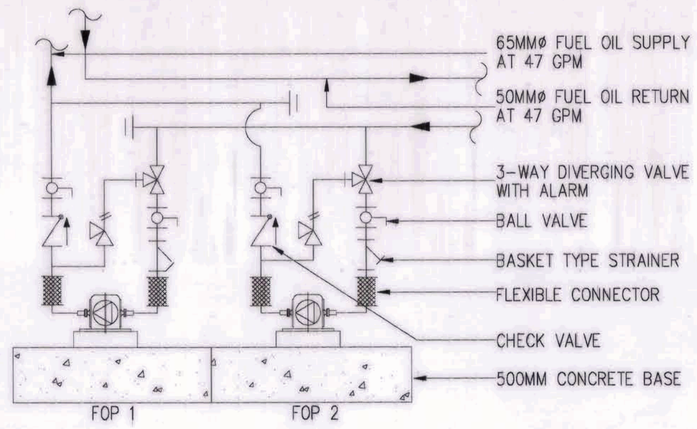
- AUTOMATIC FLOAT VALVE
- BALL VALVE
- BASKET TYPE STRAINER
- FLEXIBLE CONNECTOR
- SAFETY OR RELIEF VALVE
- SOLENOID VALVE
- 3-WAY DIVERGING VALVE WITH ALARM
- FOOT VALVE
- CHECK VALVE
- FOP — FUEL OIL PUMP
- FOST — FUEL OIL STORAGE TANK

PUMP SELECTION:

REQUIRED VOLUME IN DAY TANK
$V = 221.8 \frac{Li}{hr} \times 2$ GENSET x 8 HRS. = 3,548.8 Li

CONSIDERING 20 MINS. FILLING TIME
$\frac{3,548.8\ Li}{20\ MINUTES} \times \frac{1\ GAL}{3.78\ Li} = 46.94$ GAL/MIN

SAY; 1 UNIT OF 47 GAL/MIN (OPERATION) &
1 UNIT OF 47 GAL/MIN (STAND-BY)



AUTOMATIC / MANUAL SEQUENCE FOR FUEL OIL FILLING AND PUMP OPERATION:

A. MANUAL MODE

1.) IN THE "MANUAL MODE" EACH PUMP CAN BE STARTED OR STOPPED MANUALLY VIA "H/O/A" CONTROLLER/SELECTOR SWITCH.

H – HAND/MANUAL
O – OFF
A – AUTOMATIC

SEQENCE: 1.1) SET SELECTOR SWITCH TO "H" POSITION FOR MANUAL MODE.
1.2) SELECT EITHER FOP-1 OR FOP-2.
1.3) PRESS THE START/STOP BUTTON TO RUN/STOP THE PUMP.

B. AUTOMATIC MODE

1.) IN THE "AUTOMATIC MODE" EACH PUMP SHALL START ALTERNATELY BASED ON FUEL LEVEL AT BOTH FUEL OIL DAY TANKS AND BULK FUEL STORAGE TANKS.

H – HAND/MANUAL
O – OFF
A – AUTOMATIC

SEQENCE: 1.1) SET SELECTOR SWITCH TO "A" POSITION FOR AUTOMATIC MODE.
1.2) ONCE THE FUEL DAY TANKS REACHES THE PRESET MINIMUM FUEL LEVEL, FOP-1 & 2 WILL RUN DEPENDING ON THE LEAD-LAG SETTING. ONCE THE FUEL DAY TANK REACHES THE PRESET MAXIMUM FUEL LEVEL, THE PUMP WILL STOP OPERATION.
1.4) PUMPS WILL RUN/STOP ALTERNATELY AS THE FUEL LEVEL IN THE FUEL DAY TANK REACHES THE MINIMUM AND MAXIMUM LEVELS.

NOTES:

1.) IF THE FUEL LEVEL SENSORS AT THE FUEL OIL STORAGE TANKS SENSES THE FUEL LEVEL THAT IS AT "LOW LEVEL", FUEL OIL PUMPS WILL NOT RUN EVEN IF THE DAY TANKS ARE ALSO AT A "LOW FUEL LEVEL" ALARM. THIS IS TO PROTECT THE FUEL OIL PUMP FROM RUNNING WITHOUT ANY FUEL AT THE FUEL OIL STORAGE TANKS.

2.) FOP-1 SHALL SERVED AS THE MAIN PUMP, WHILE FOP-2 SHALL BE THE STAND BY UNIT.

3.) THE AUTOMATIC FLOAT VALVE HAS A ELECTRONIC SWITCH ACTUATED BY FUEL OIL LEVEL. DURING FILLING, WHEN THE DAY TANKS REACHES THE MAXIMUM SETTING OF FUEL OIL LEVEL, THE ELECTRONIC SWITCH ACTIVATE THE VALVE TO CLOSE AUTOMATICALLY. ONCE THE FUEL OIL DROPS TO MINIMUM LEVEL, THE ELECTRONIC SWITCH WILL ACTIVATE THE VALVE TO OPEN.

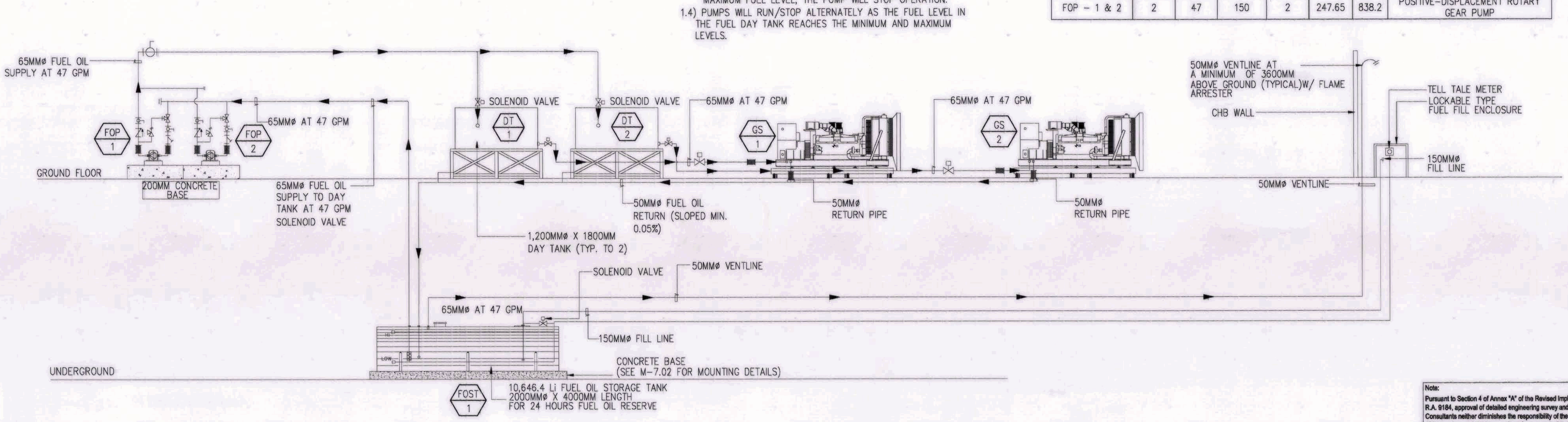
4.) THE SOLENOID VALVE WILL SERVE AS A BACK UP VALVE INCASE AUTOMATIC FLOAT VALVE FAILS. THE VALVE HAS A FUEL OIL LEVEL SENSORS WHICH WILL ACTIVATE THE VALVE TO CLOSE OR OPEN WHEN MAXIMUM OR MINIMUM FUEL OIL LEVEL SETTING HAVE REACH RESPECTIVELY.

5.) WHEN PRESSURE IN THE MAIN HEADER REACHES THE MAX SETTING, THE PUMP WILL AUTOMATICALLY SWITCH OFF. THE PUMP WILL SWITCH ON WHEN PRESSURE DROPS TO THE MINIMUM SETTING, BUT AFTER A TIME DELAY TO PROTECT THE MOTOR AND STARTER.

6.) IF THE FUEL OIL PUMP FAILS TO SWITCH OFF EVEN THE PRESSURE IN THE MAIN HEADER REACHES THE MAX SETTING OR IF PRESSURE SENSORS IN THE MAIN HEADER ACTUATING THE PUMP FAILS, THE 3-WAY DIVERGING VALVE PRESSURE SENSORS AT THE SUCTION SIDE OF PUMP WILL TRIGGER THE ALARM AS WELL AS THE VALVE TO CLOSE THE FUEL SUPPLY LINE OF PUMP WHILE DIVERTING THE FLOW TO BYPASS THE PUMP SUCTION. THE PUMP IS ALSO ACTUATED BY THE PRESSURE SENSORS TO SWITCH OFF WHEN IT REACHES MAXIMUM PRESSURE SETTING TO PROTECT THE FUEL OIL PUMP.

7.) THE MODULATING VALVE AND TELL TALE METER IS ACTUATED BY HIGH AND LOW SENSORS IN THE FUEL OIL STORAGE TANK. DURING FILLING, WHEN IT REACHES THE MAXIMUM OR MINIMUM LEVEL, THE MODULATING VALVE CLOSES OR OPEN RESPECTIVELY. WHILE THE TALE TELL METER WILL INFORM THE PERSON FILLING THE TANK THE LEVEL OF FUEL WHEN ITS FULL OR LOW.

FUEL OIL STORAGE TANK (FOST)								
UNIT DESIGNATION	QTY	TANK SIZE (LITERS)	DIAMETER (MM)	LENGTH (MM)	FILLING (MM)	RETURN PIPE SIZE (MM)	SUCTION PIPE SIZE (MM)	REMARKS
FOST – 1	1	10,646.4	2000	4000	150	50	65	SHALL BE MADE OF 6.5MM THICK B.1 STEEL PLATE
FUEL OIL PUMP (FOP)								
UNIT DESIGNATION	QTY	CAPACITY (GPM)	PRESSURE (PSI)	POWER RATING (HP)	DIAMETER (MM)	LENGTH (MM)	REMARKS	
FOP – 1 & 2	2	47	150	2	247.65	838.2	POSITIVE-DISPLACEMENT ROTARY GEAR PUMP	



1 / M4-01 **GENSET FUEL OIL PIPING SCHEMATIC DIAGRAM**
SCALE NTS

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.
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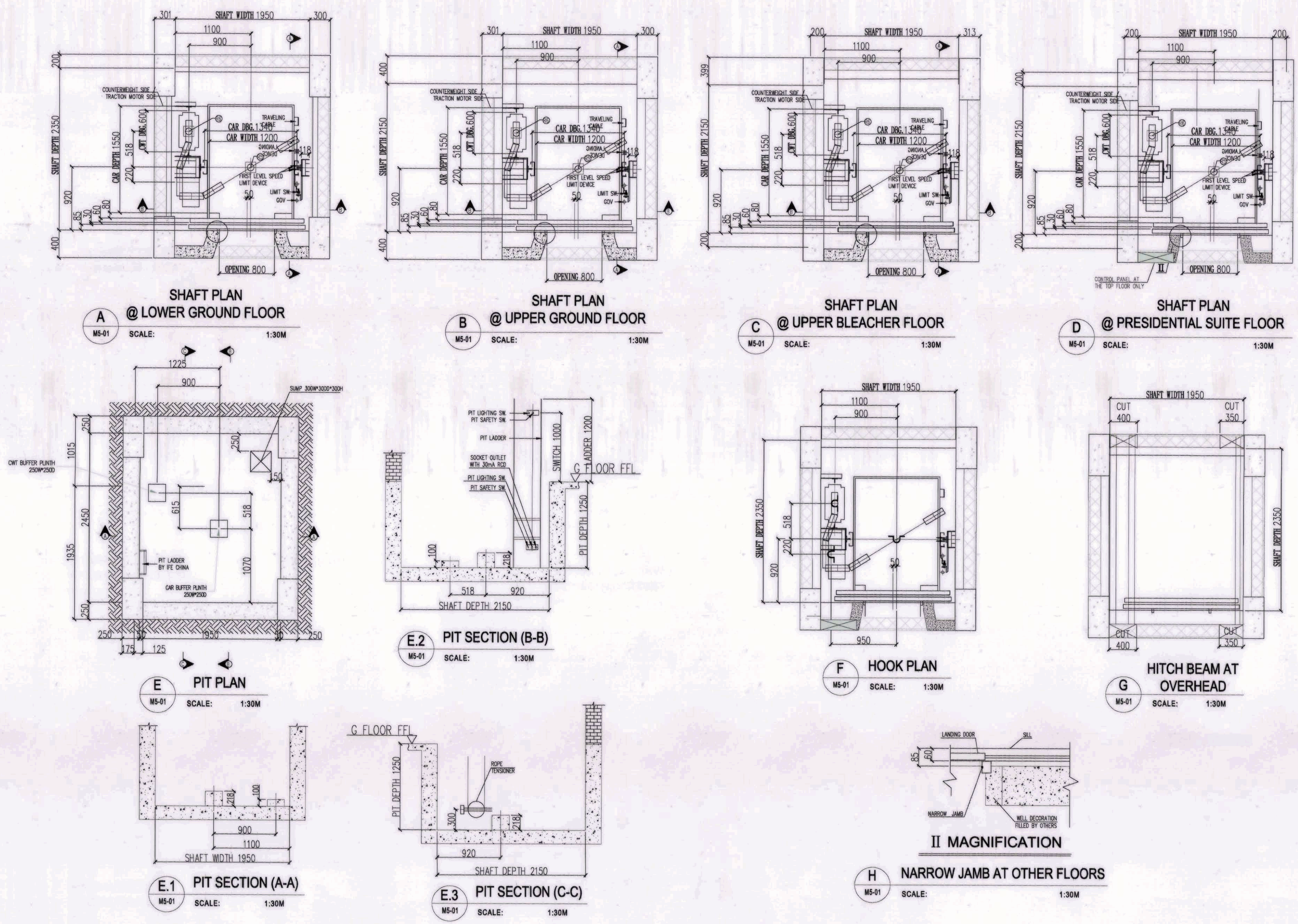
GRAPHIC SCALE:
4000 2000 0 4000 10000
SCALE NTS
N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation, 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City — JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS — VIRGILIO A. MADRIZO, PRESIDENT/CEO	AS-BUILT DRAWING; NGAC PHASE 1A; AQUATIC CENTER; NEW CLARK CITY, CAPAS, TARLAC	GENSET FUEL OIL PIPING SCHEMATIC DIAGRAM	M4-01



ELEVATOR PLAN AND SECTION

1 M5-01 SCALE: 1:30M

LIFT SPECIFICATION & DATA	
STANDARD	
ELEVATOR TYPE	JOYMORE-6
RATED LOAD/PERSON	800kg (10 Persons)
SPEED	1.0 m/s
ROPING	2:1
NO. OF FLR/STOP/LANDING	5/4/4
NO OF CAR ENTRANCE (S)	1
CAR INTERNAL WIDTH	1200
CAR INTERNAL DEPTH	1550
CAR INTERNAL HEIGHT	2420
LIFT ENTRANCE WIDTH	800
LIFT ENTRANCE HEIGHT	2100
DOOR OPERATION	2 PANELS CENTRAL OPENING
CONTROL SYSTEM	CTRL 70A
OPERATION	SIMPLEX
DIAMETER OF MAIN SHEAVE	ø400
DIA. OF DEFLECTOR SHEAVE	ø400/ø350/ø320
MAIN ROPE	ø 8 x 6
TYPE OF GOVERNOR	XSQ115-13
CAR RAIL	T75-3/B
COUNTERWEIGHT RAIL	TK5A
TYPE OF CAR BUFFER	HYF80B
BUFFER STROKE	80
TYPE OF CW BUFFER	HYF80B
BUFFER STROKE	80
CAR WEIGHT	950 KG
MAX WT ALLOWANCE (FINISHES)	200 KG
COUNTERWEIGHT WT.	1550 KG
BALANCE	45%
COUNTERWEIGHT SIZE	600 x 280
WT OF TRACTION MACHINE	350 KG

FINISHES, DECORATION & CONTROLS	
CABIN WALL FINISH	
CAR DOOR FINISH	
LANDING DOOR FINISH	
CEILING	
HANDRAIL	
FLOORING	
HOP	
COP	

ELECTRICAL REQUIREMENTS	
MAIN SUPPLY	3 PHASE 400V 60HZ
AUXILIARY SUPPLY	SINGLE PHASE 220V 60HZ
RATED CURRENT	12.0 A
STARTING CURRENT	18.0 A
MOTOR OUTPUT POWER	5.3 kW
MAXIMUM START HOUR	240

OPTIONAL DEVICES	
ARD	
REGENERATIVE SYSTEM	
ANNOUNCIATOR	

REACTIONS		
R1	HITCH BEAM SUPPORT FRONT SIDE	25
R2	HITCH BEAM SUPPORT REAR SIDE	22
R3	TRACTION MOTOR UPPER BRACKET	31
R4	TRACTION MOTOR LOWER BRACKET	62
R5	CAR BUFFER PLINTH	71
R6	COUNTERWT BUFFER PLINTH	56
R9		13
R10		9.8

Note:
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GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1:30

N

OWNER: NGAC PHASE I JV COMPANY
BCDA AND MTD Clark, Inc.
VIVENCIO B. DIZON, PRESIDENT
PATRICK NICHOLAS P. DAVID, PRESIDENT

PREPARED BY:
Hilmarc's Construction Corporation
1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City
JESUS V. HERBAS, PROJECT MANAGER

REVIEWED AND VALIDATED BY:
FILIPINAS DRAVO CORPORATION
Architectural & Engineering Consultants
ALFREDO R. REVILLA, PROJECT MANAGER

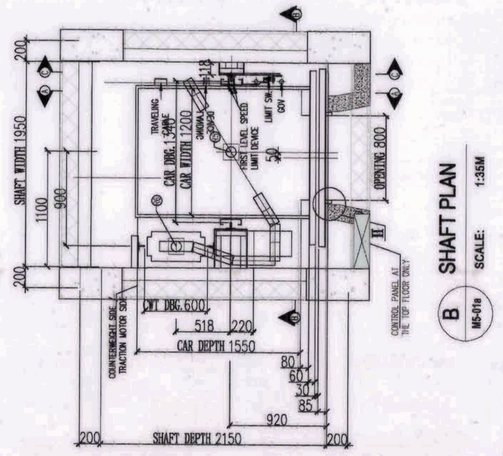
SUBMITTED BY:
BANDAR HEBAT BUILDERS, INC.
ISAAC S. DAVID, PRESIDENT

CERTIFIED BY: INDEPENDENT CONSULTANT
TCGI ENGINEERS
VIRGILIO A. MADRAZO, PRESIDENT/CEO

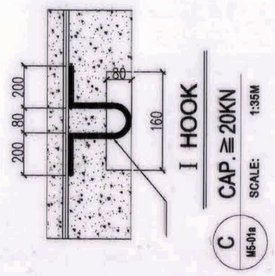
PROJECT TITLE:
AS-BUILT DRAWING
NGAC PHASE 1A
AQUATIC CENTER
NEW CLARK CITY, CAPAS, TARLAC

SHEET CONTENTS: ELEVATOR PLAN AND SECTION

SHEET NO. M5-01



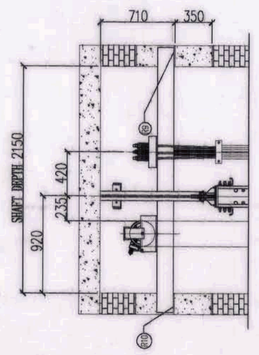
B SHAFT PLAN
M5-01a SCALE: 1:35M



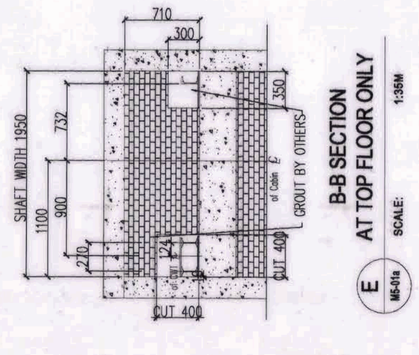
C
M5-01a SCALE: 1:35M

WALL CONCRETE		
WALL THK		
PD(DH)	4750 MM	
UB	5090 MM	
UGD	3350 MM	
UG	3800 MM	
LG	5000 MM	
PIT	1250 MM	

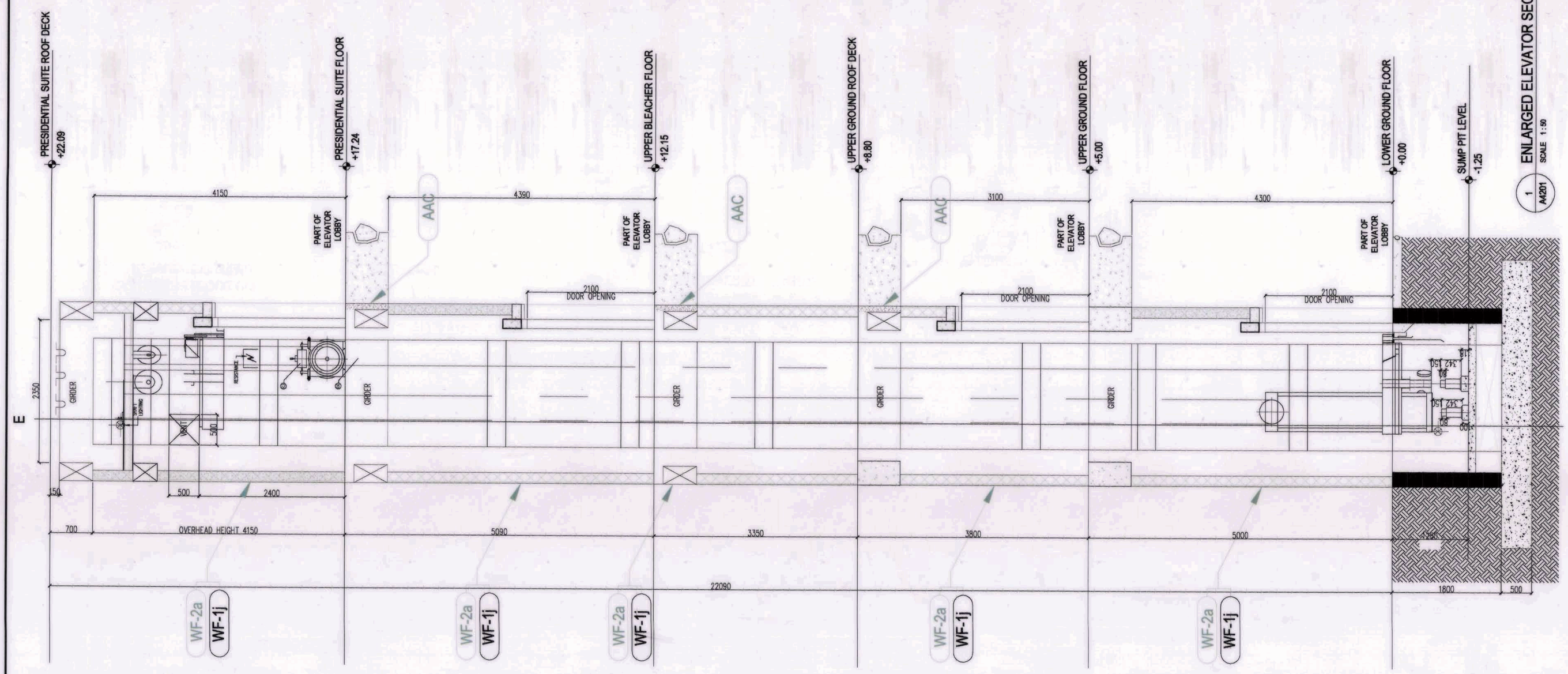
NOT STOP



C-C SECTION
AT TOP FLOOR ONLY
D
M5-01a SCALE: 1:35M



B-B SECTION
AT TOP FLOOR ONLY
E
M5-01a SCALE: 1:35M



1 ELEVATOR PLAN AND SECTION
M5-01a SCALE: 1:35M

SHAFT SIDE SECTION C-C
A
M5-01a SCALE: 1:35M

LIFT SPECIFICATION & DATA	
STANDARD	
ELEVATOR TYPE	JOYMORE-6
RATED LOAD/PERSON	800kg (10 Persons)
SPEED	1.0 m/s
ROPING	2:1
NO. OF FLR/STOP/LANDING	5/4/4
NO OF CAR ENTRANCE (S)	1
CAR INTERNAL WIDTH	1200
CAR INTERNAL DEPTH	1550
CAR INTERNAL HEIGHT	2420
LIFT ENTRANCE WIDTH	800
LIFT ENTRANCE HEIGHT	2100
DOOR OPERATION	2 PANELS CENTRAL OPENING
CONTROL SYSTEM	CTRL 70A
OPERATION	SIMPLEX
DIAMETER OF MAIN SHEAVE	ø400
DIA. OF DEFLECTOR SHEAVE	ø400/ø350/ø320
MAIN ROPE	ø 8 x 6
TYPE OF GOVERNOR	XSQ115-13
CAR RAIL	T75-3/B
COUNTERWEIGHT RAIL	TK5A
TYPE OF CAR BUFFER	HYF80B
BUFFER STROKE	80
TYPE OF CW BUFFER	HYF80B
BUFFER STROKE	80
CAR WEIGHT	950 KG
MAX WT ALLOWANCE (FINISHES)	200 KG
COUNTERWEIGHT WT.	1550 KG
BALANCE	45%
COUNTERWEIGHT SIZE	600 x 280
WT OF TRACTION MACHINE	350 KG

FINISHES, DECORATION & CONTROLS	
CABIN WALL FINISH	
CAR DOOR FINISH	
LANDING DOOR FINISH	
CEILING	
HANDRAIL	
FLOORING	
HOP	
COP	

ELECTRICAL REQUIREMENTS	
MAIN SUPPLY	3 PHASE 400V 60HZ
AUXILIARY SUPPLY	SINGLE PHASE 220V 60HZ
RATED CURRENT	12.0 A
STARTING CURRENT	18.0 A
MOTOR OUTPUT POWER	5.3 kW
MAXIMUM START HOUR	240

OPTIONAL DEVICES	
ARD	
REGENERATIVE SYSTEM	
ANNOUNCIATOR	

REACTIONS		
R1	HITCH BEAM SUPPORT FRONT SIDE	25
R2	HITCH BEAM SUPPORT REAR SIDE	22
R3	TRACTION MOTOR UPPER BRACKET	31
R4	TRACTION MOTOR LOWER BRACKET	82
R5	CAR BUFFER PLINTH	71
R6	COUNTERWT BUFFER PLINTH	56
R9		13
R10		9.8

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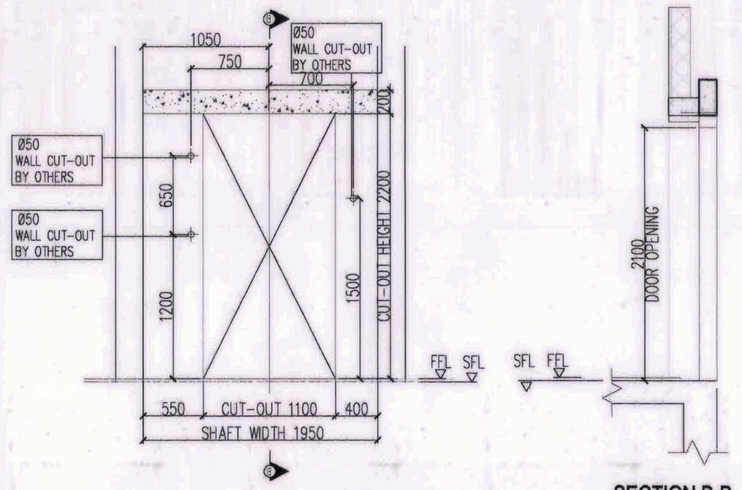
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1: 35

N

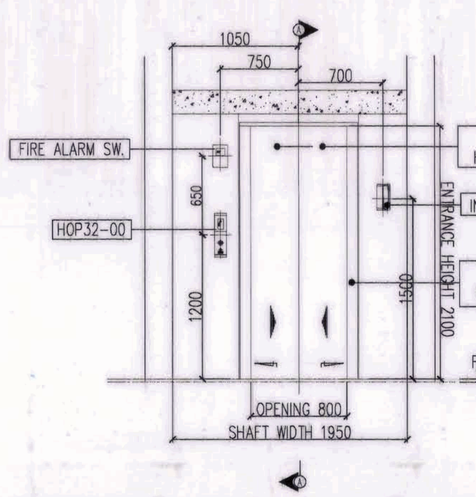
OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr. Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	ELEVATOR PLAN AND SECTION	M5-01a



ENTRANCE CUT-OUT AT LG FLOOR ONLY

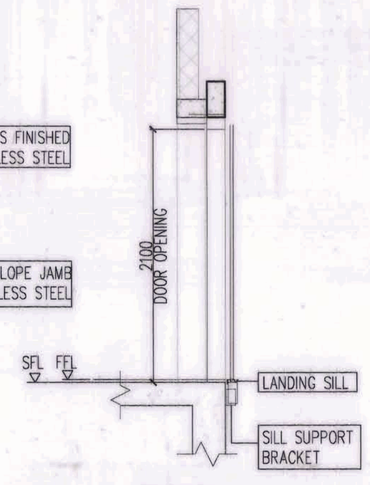
A M5-01b SCALE: 1:35M

SECTION B-B



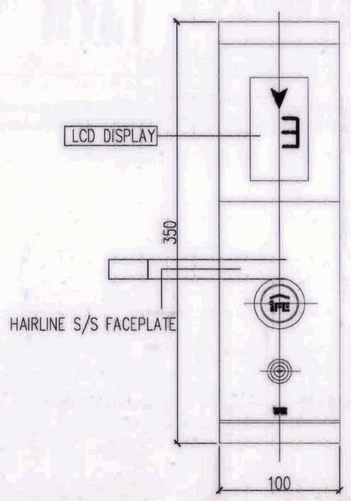
ENTRANCE ELEVATION AT LG FLOOR ONLY

D M5-01b SCALE: 1:35M

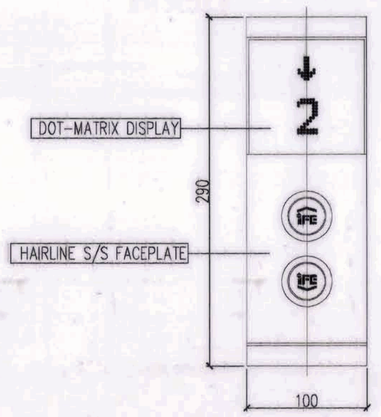


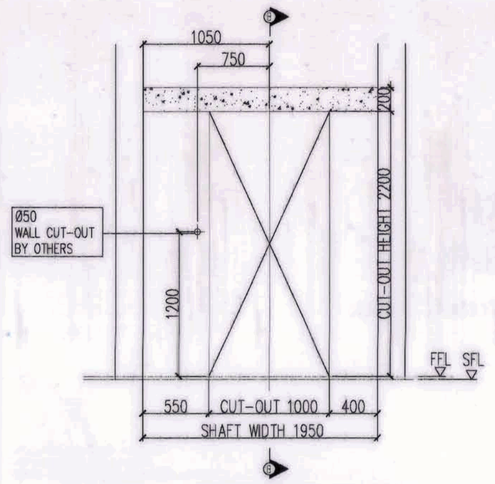
SECTION A-A

HOP32-00
AT LG FLOOR ONLY



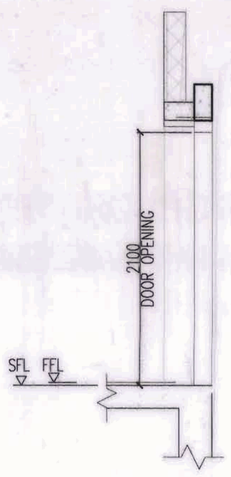
HOP28-00
AT OTHER FLOORS ONLY



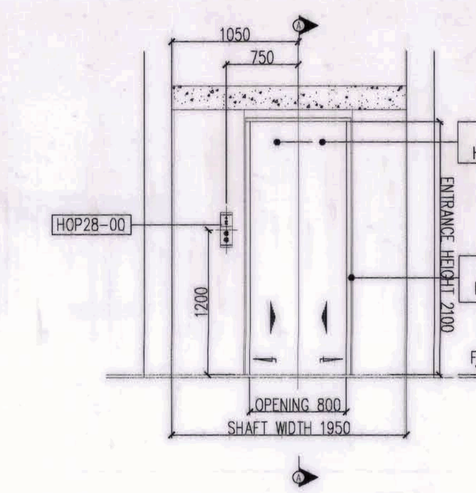


ENTRANCE CUT-OUT AT OTHERS FLOOR ONLY

B M5-01b SCALE: 1:35M

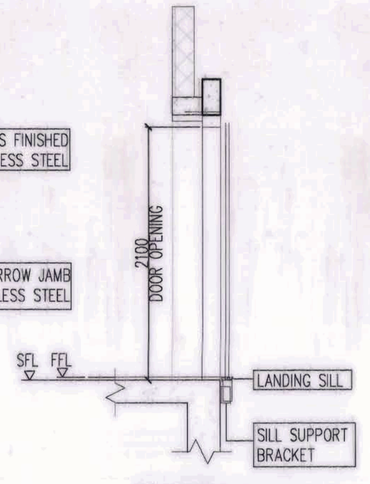


SECTION B-B



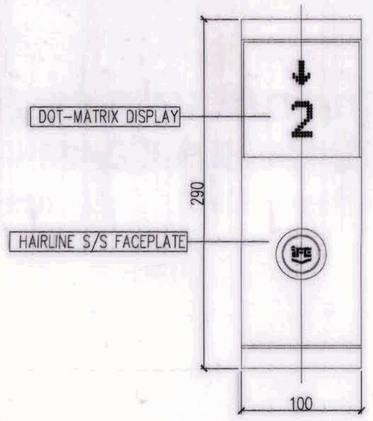
ENTRANCE ELEVATION AT OTHER FLOOR ONLY

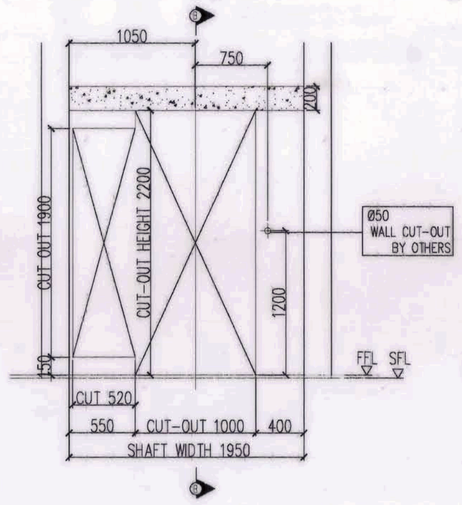
E M5-01b SCALE: 1:35M



SECTION A-A

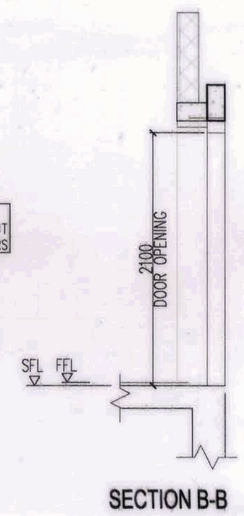
HOP28-00
AT TOP FLOOR ONLY



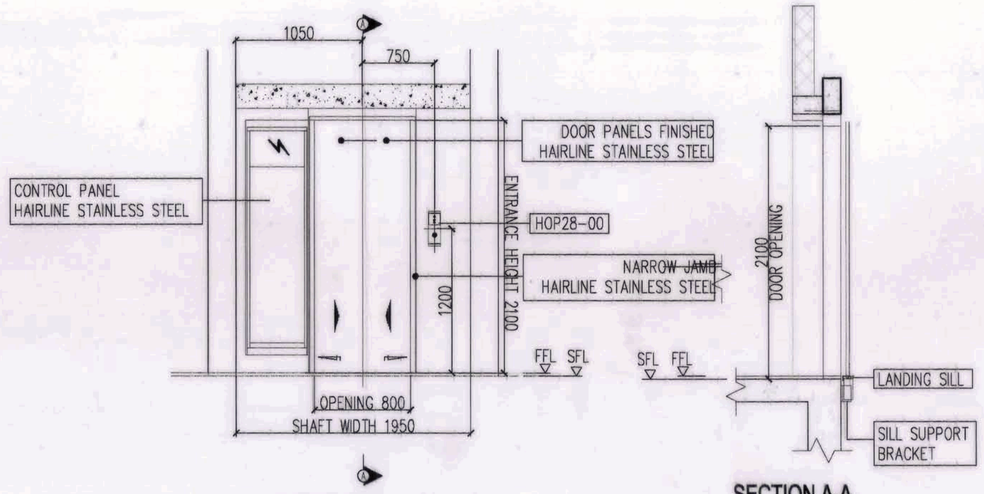


ENTRANCE CUT-OUT AT TOP FLOOR ONLY

C M5-01b SCALE: 1:35M



SECTION B-B

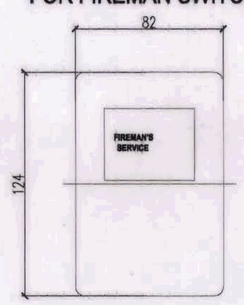


ENTRANCE ELEVATION AT TOP FLOOR ONLY

F M5-01b SCALE: 1:35M

SECTION A-A

MAGNIFICATION
FOR FIREMAN SWITCH



G M5-01b SCALE: 1:35M HALL OPERATION PANEL

1 M5-01b SCALE: 1:35M

ELEVATOR PLAN AND SECTION

LIFT SPECIFICATION & DATA	
STANDARD	
ELEVATOR TYPE	JOYMORE-6
RATED LOAD/PERSON	800kg (10 Persons)
SPEED	1.0 m/s
ROPING	2:1
NO. OF FLR/STOP/LANDING	5/4/4
NO OF CAR ENTRANCE (S)	1
CAR INTERNAL WIDTH	1200
CAR INTERNAL DEPTH	1550
CAR INTERNAL HEIGHT	2420
LIFT ENTRANCE WIDTH	800
LIFT ENTRANCE HEIGHT	2100
DOOR OPERATION	2 PANELS CENTRAL OPENING
CONTROL SYSTEM	CTRL 70A
OPERATION	SIMPLEX
DIAMETER OF MAIN SHEAVE	ø400
DIA. OF DEFLECTOR SHEAVE	ø400/ø350/ø320
MAIN ROPE	ø 8 x 6
TYPE OF GOVERNOR	XSQ115-13
CAR RAIL	T75-3/B
COUNTERWEIGHT RAIL	TK5A
TYPE OF CAR BUFFER	HYF80B
BUFFER STROKE	80
TYPE OF CW BUFFER	HYF80B
BUFFER STROKE	80
CAR WEIGHT	950 KG
MAX WT ALLOWANCE (FINISHES)	200 KG
COUNTERWEIGHT WT.	1150 KG
BALANCE	45%
COUNTERWEIGHT SIZE	600 x 280
WT OF TRACTION MACHINE	350 KG

FINISHES, DECORATION & CONTROLS	
CABIN WALL FINISH	
CAR DOOR FINISH	
LANDING DOOR FINISH	
CEILING	
HANDRAIL	
FLOORING	
HOP	
COP	

ELECTRICAL REQUIREMENTS	
MAIN SUPPLY	3 PHASE 400V 60HZ
AUXILIARY SUPPLY	SINGLE PHASE 220V 60HZ
RATED CURRENT	12.0 A
STARTING CURRENT	18.0 A
MOTOR OUTPUT POWER	5.3 kW
MAXIMUM START HOUR	240

OPTIONAL DEVICES	
ARD	
REGENERATIVE SYSTEM	
ANNOUNCIATOR	

REACTIONS		
R1	HITCH BEAM SUPPORT FRONT SIDE	25
R2	HITCH BEAM SUPPORT REAR SIDE	22
R3	TRACTION MOTOR UPPER BRACKET	31
R4	TRACTION MOTOR LOWER BRACKET	62
R5	CAR BUFFER PLINTH	71
R6	COUNTERWT BUFFER PLINTH	56
R9		13
R10		9.8

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

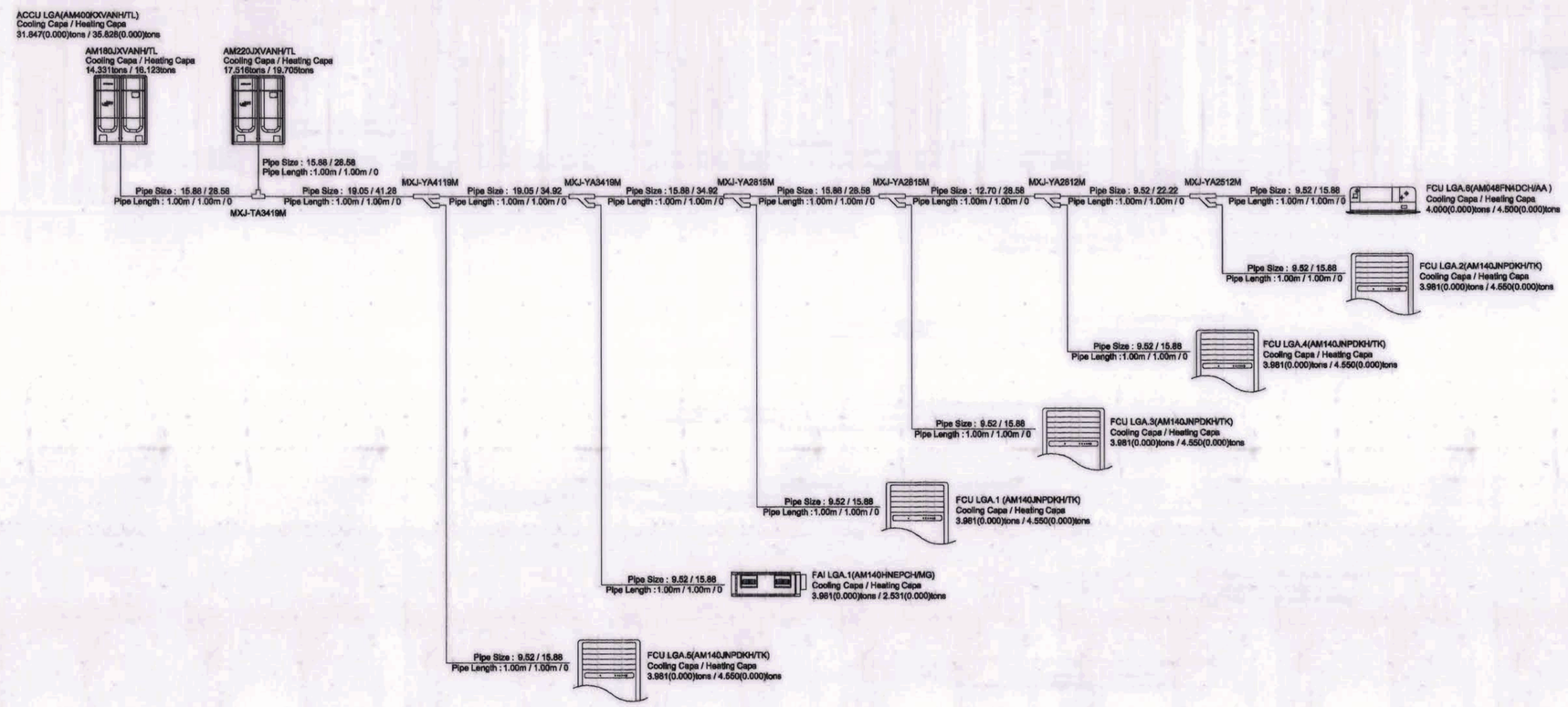
The Design Consultant shall be held fully responsible for the failure of the facilities/structures due to faulty design except for the changes made without the conformity of the Design Consultants.

GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE 1: 35

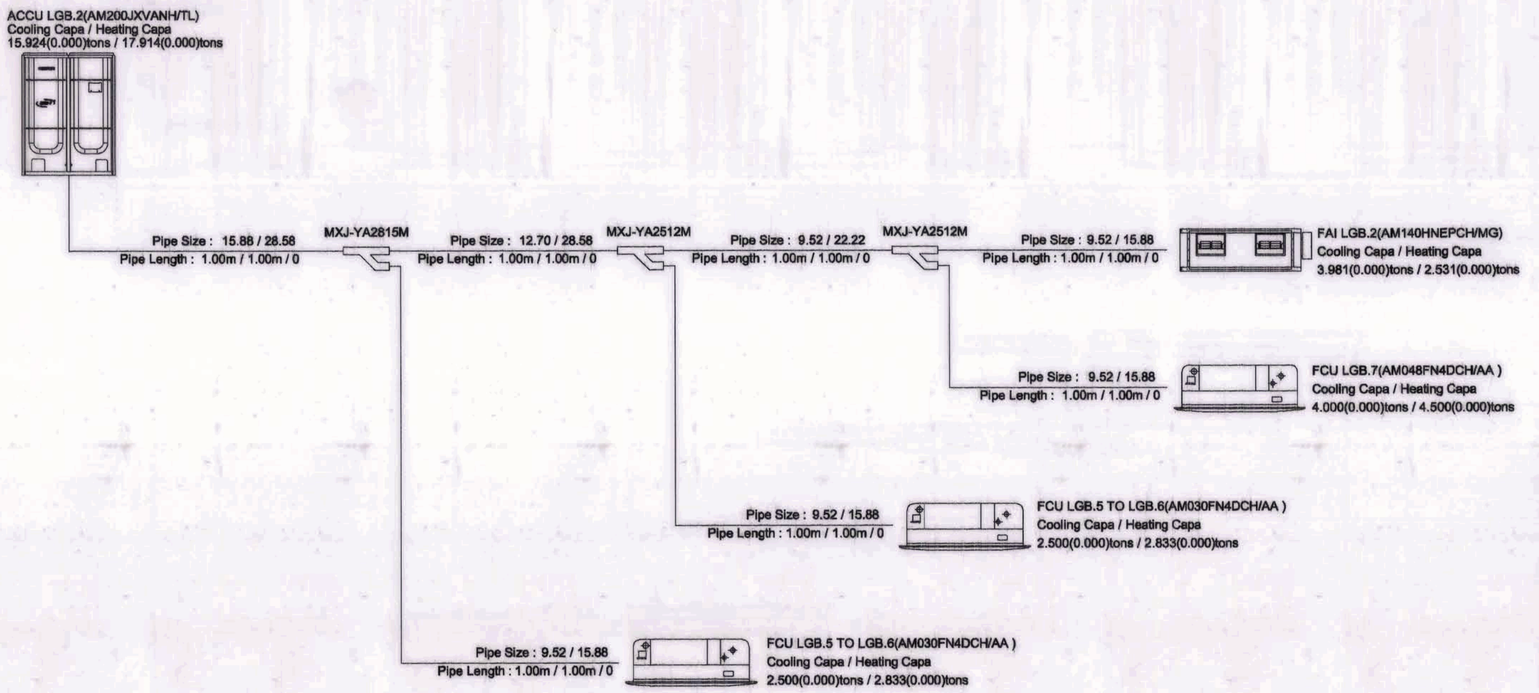
N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND NTD Clark, Inc. VIVENCIO B. DIZON PRESIDENT / PATRICK NICHOLAS P. DAVID PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	ELEVATOR PLAN AND SECTION	M5-01b



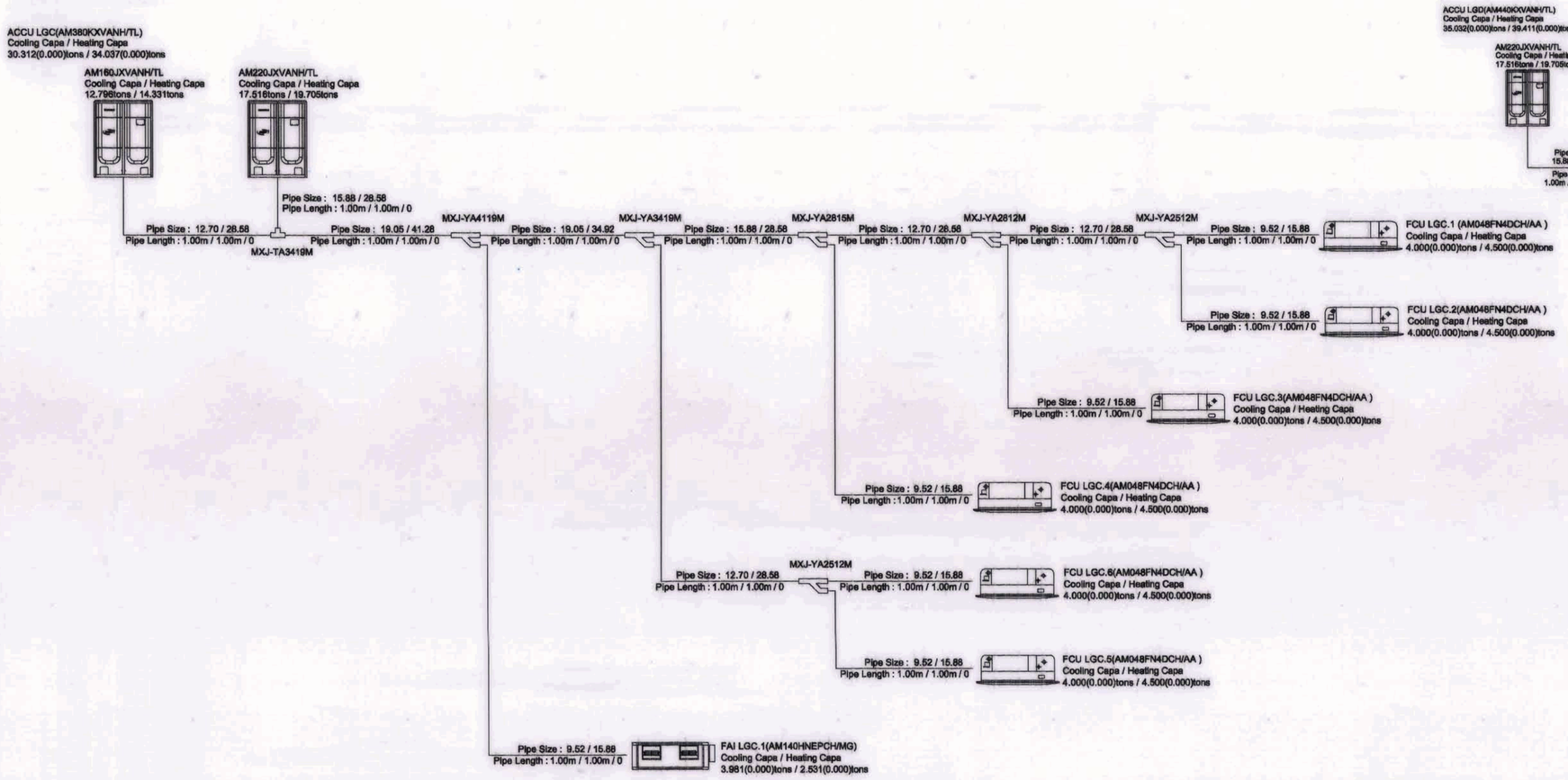
LOWER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-LGA)

1 / M6-01 NOT TO SCALE



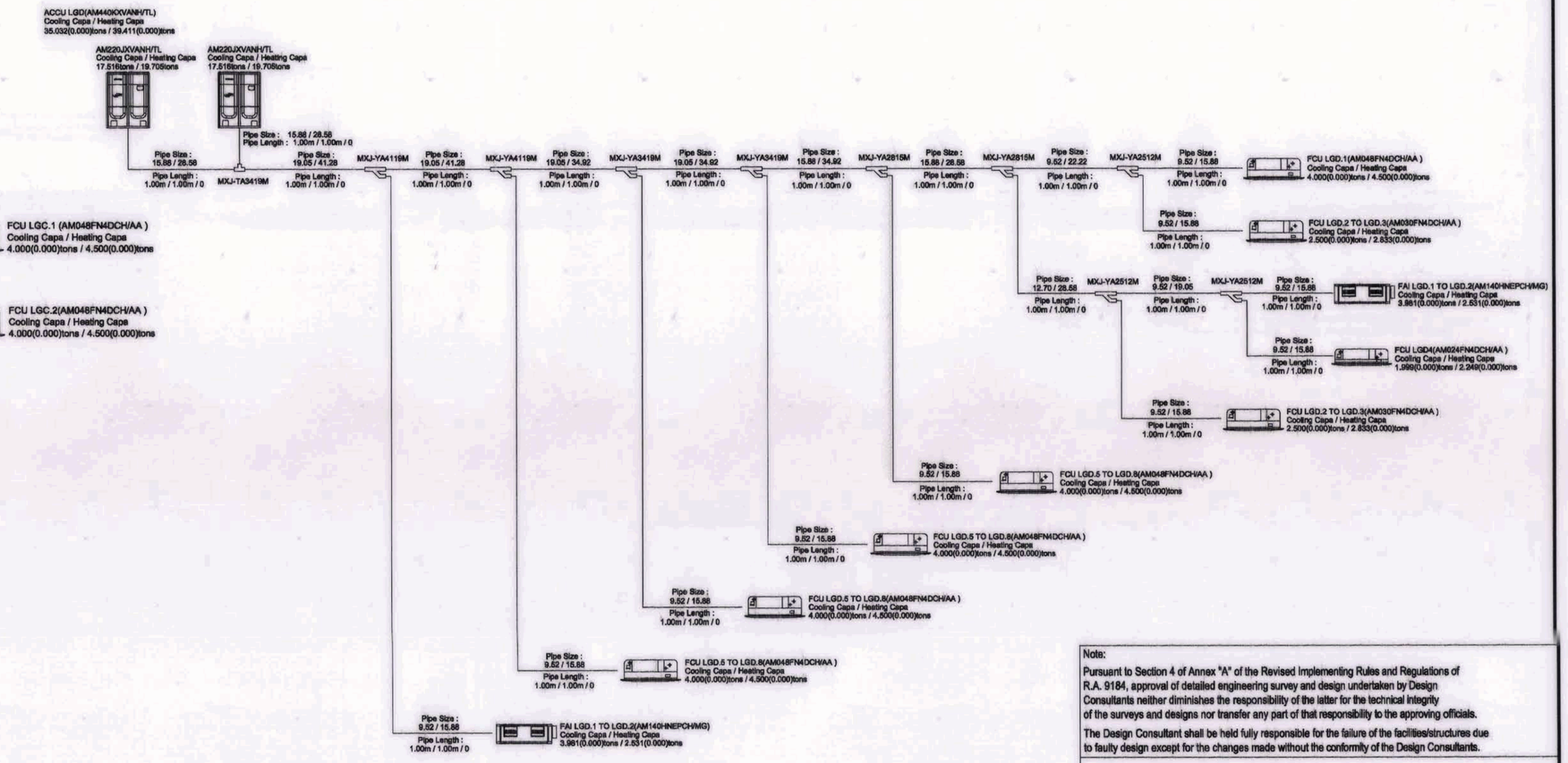
LOWER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-LGB.2)

2 / M6-01 NOT TO SCALE



LOWER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-LGC)

3 / M6-01 NOT TO SCALE



LOWER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-LGD)

4 / M6-01 NOT TO SCALE

Nota:

Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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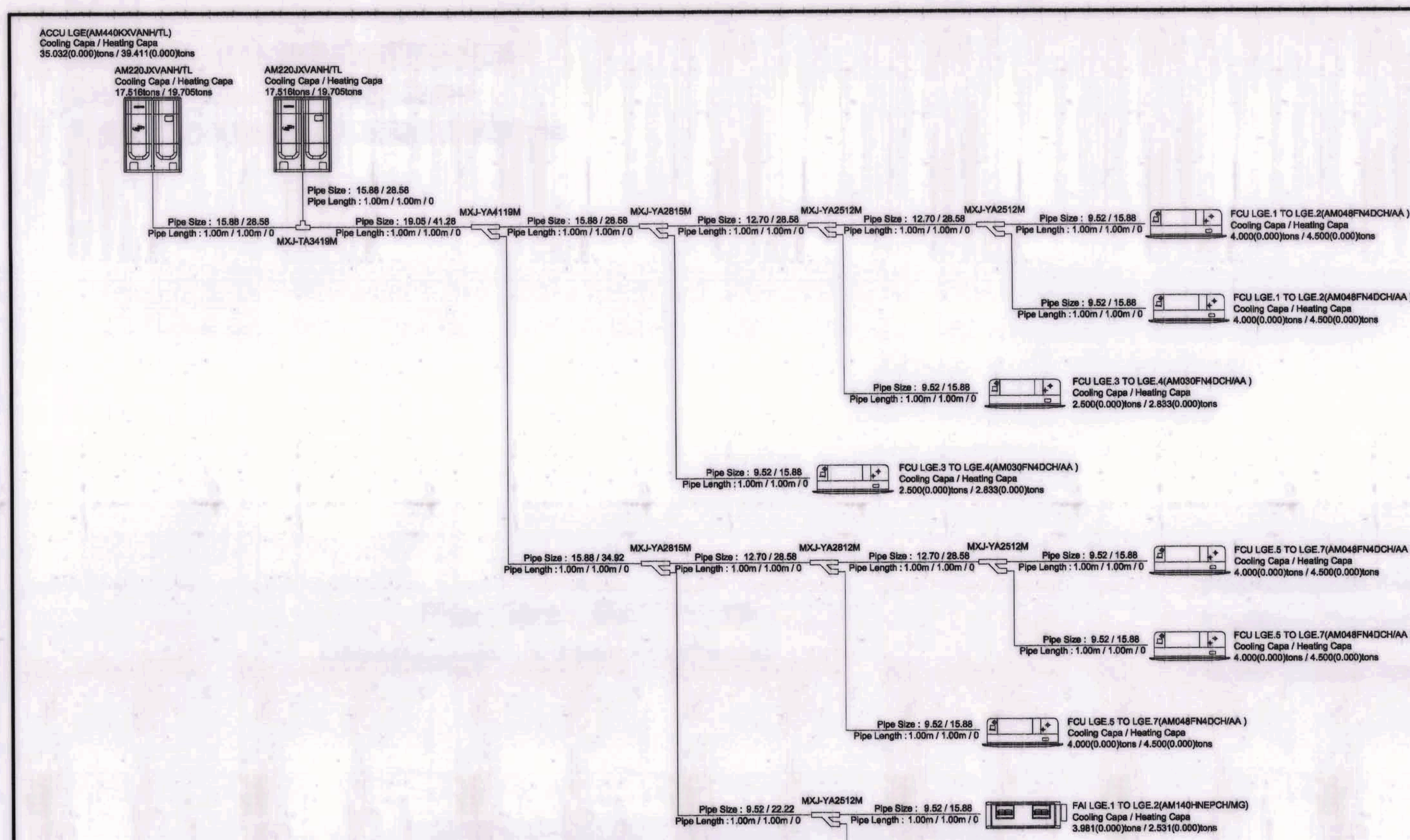
GRAPHIC SCALE:

4000 2000 0 4000 10000

SCALE NTS

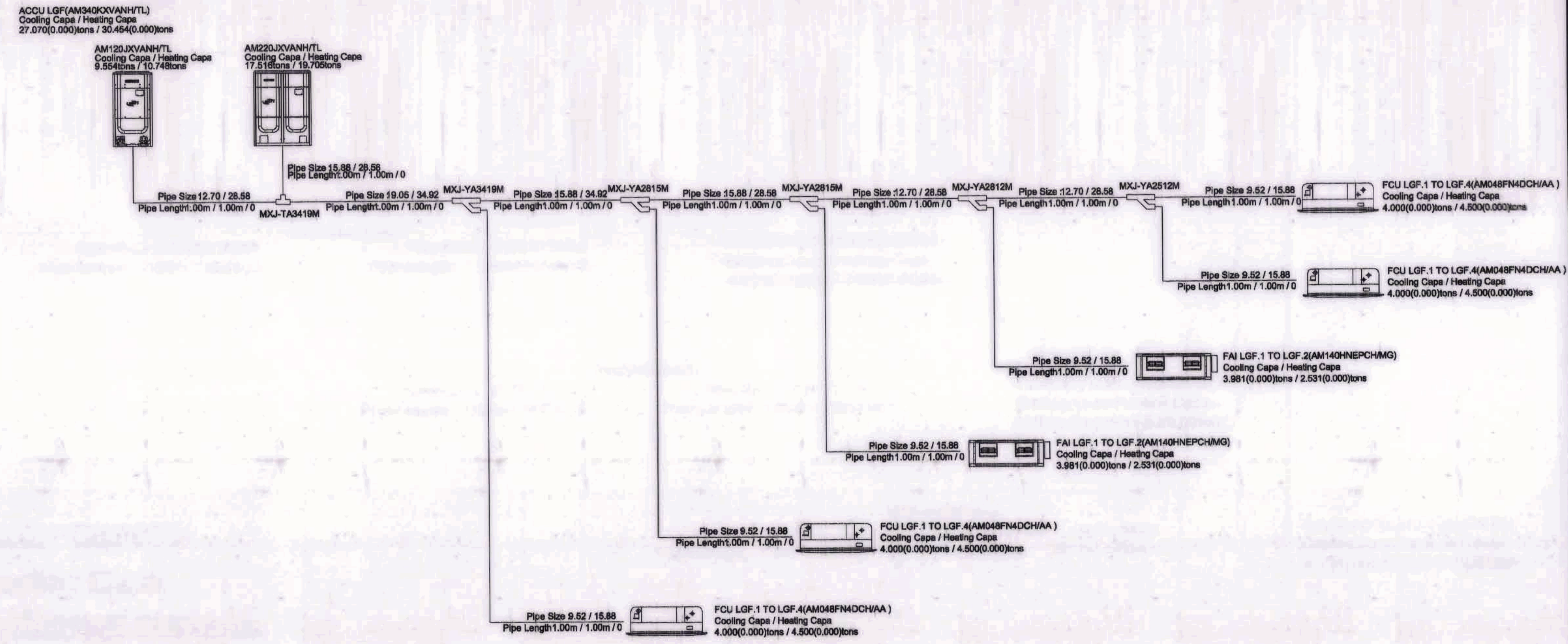
N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON PRESIDENT AND MTD Clark, Inc. PATRICK NICHOLAS P. DAVID PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	LOWER GROUND REFRIGERANT PIPING SCHEMATIC DIAGRAM	M6-01



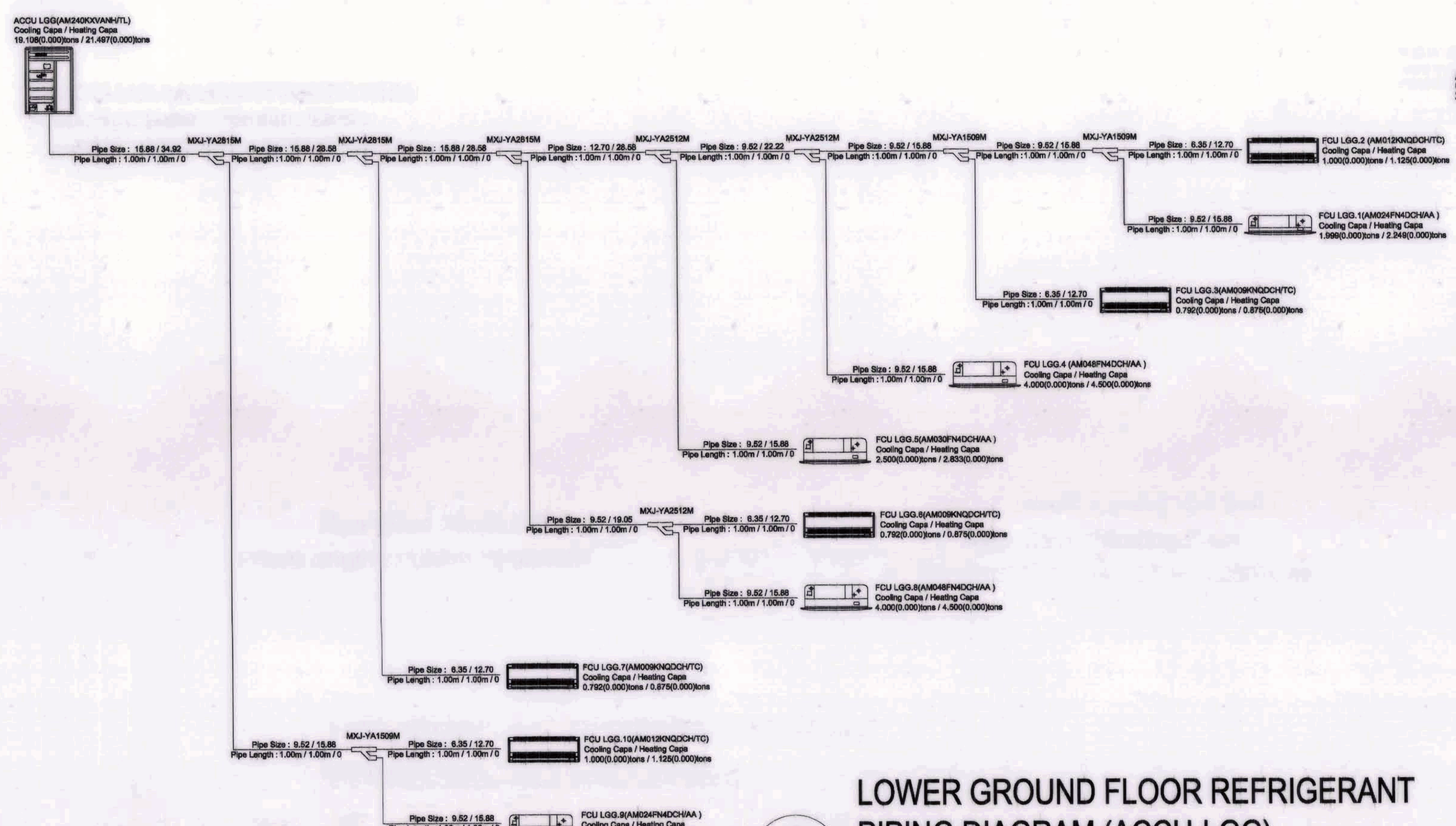
LOWER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-LGE)

1 / M6-02 NOT TO SCALE



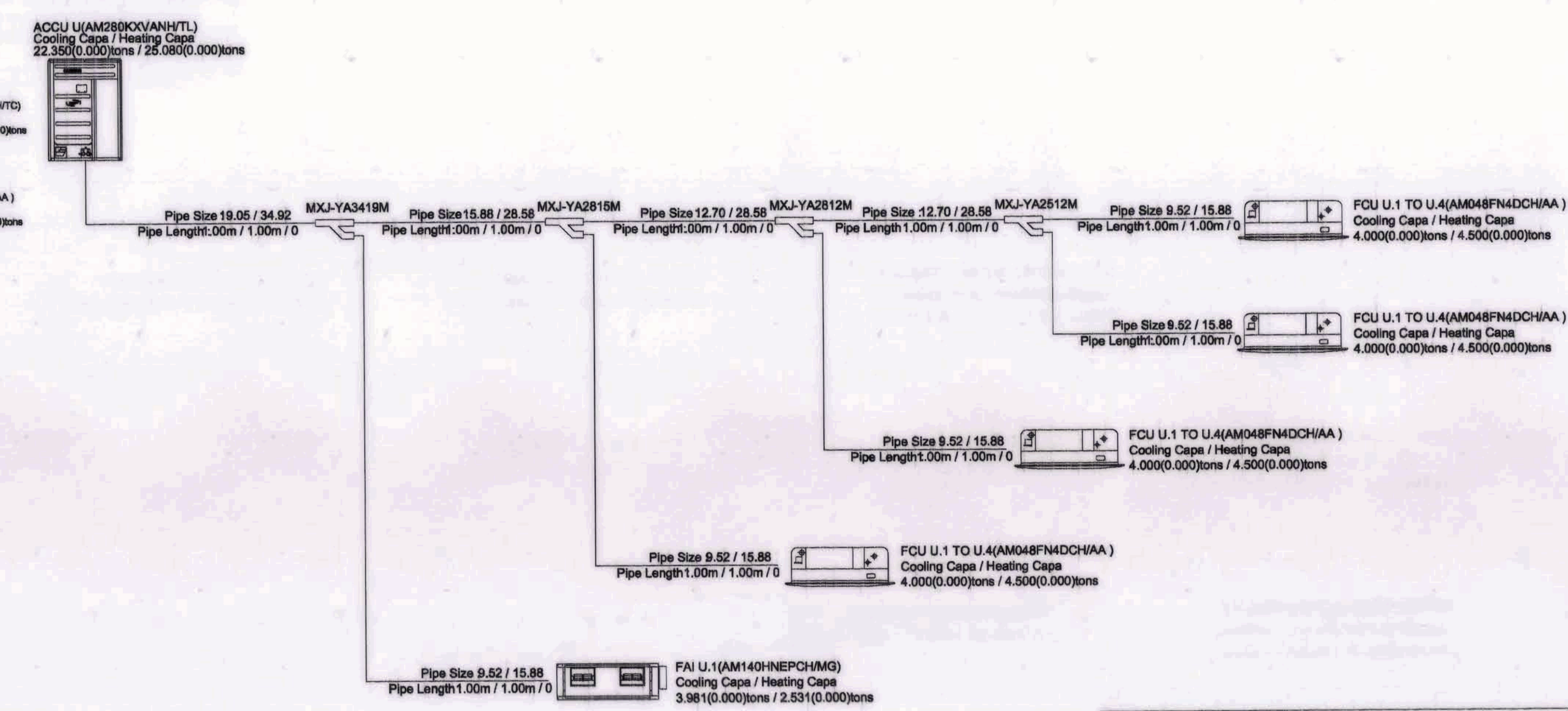
LOWER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-LGF)

2 / M6-02 NOT TO SCALE



LOWER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-LGG)

3 / M6-02 NOT TO SCALE



LOWER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-U)

4 / M6-02 NOT TO SCALE

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.
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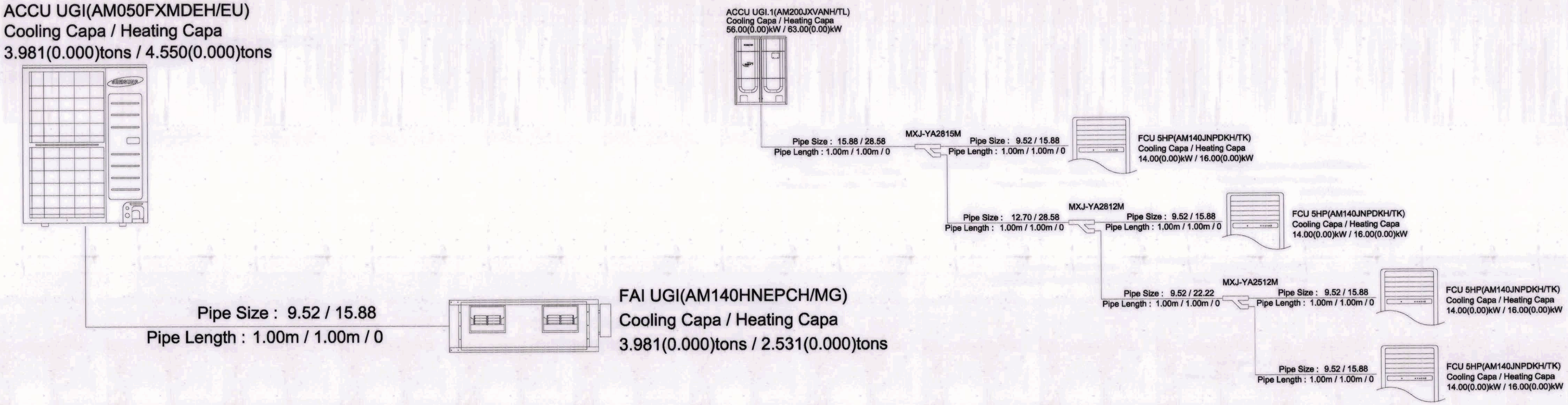
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE NTS

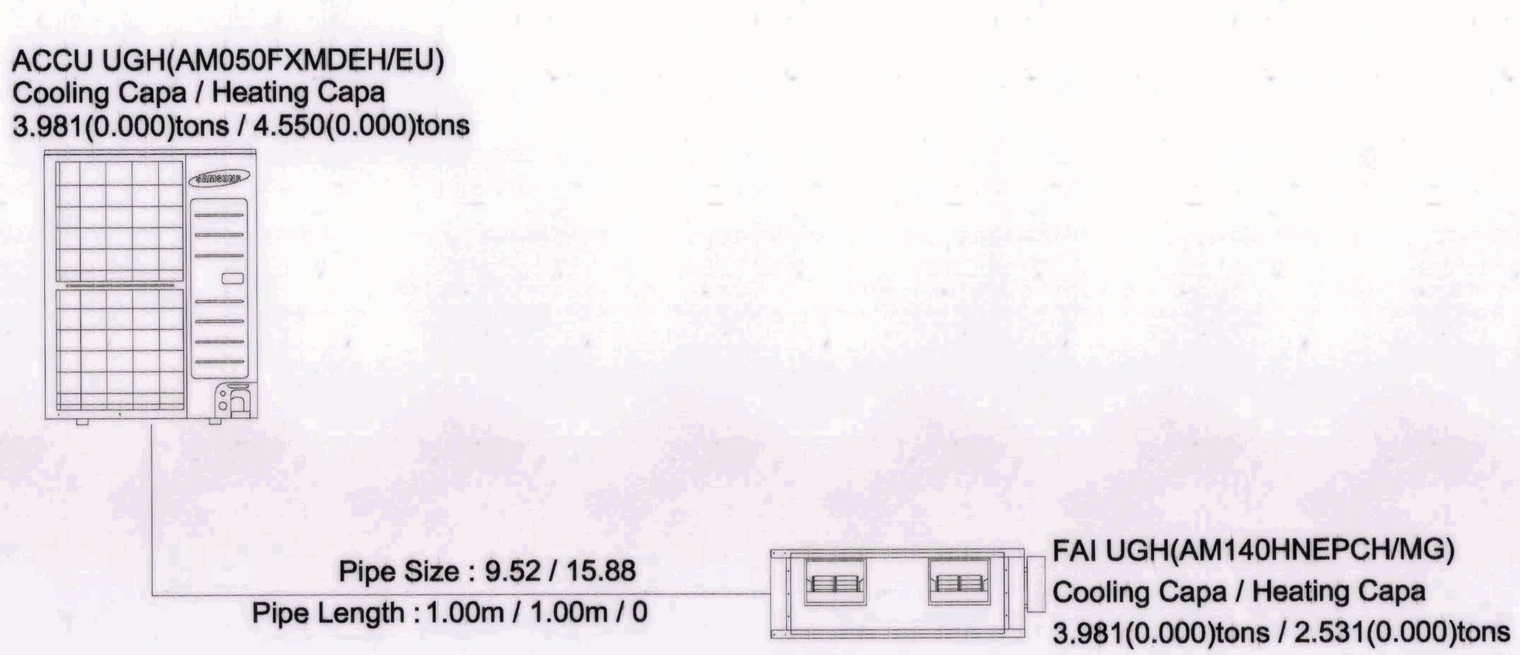
N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark Inc. VIVENCIO B. DIZON, PRESIDENT; PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation, 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City; JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants; ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC.; ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS; VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING; NGAC PHASE 1A; AQUATIC CENTER; NEW CLARK CITY, CAPAS, TARLAC	LOWER GROUND REFRIGERANT PIPING SCHEMATIC DIAGRAM	M6-02



1 M6-03 — UPPER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-UGI)
NOT TO SCALE

2 M6-03 — UPPER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-UGI.1)
NOT TO SCALE



3 M6-03 — UPPER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-UGH)
NOT TO SCALE

4 M6-03 — UPPER GROUND FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-UGH.1)
NOT TO SCALE

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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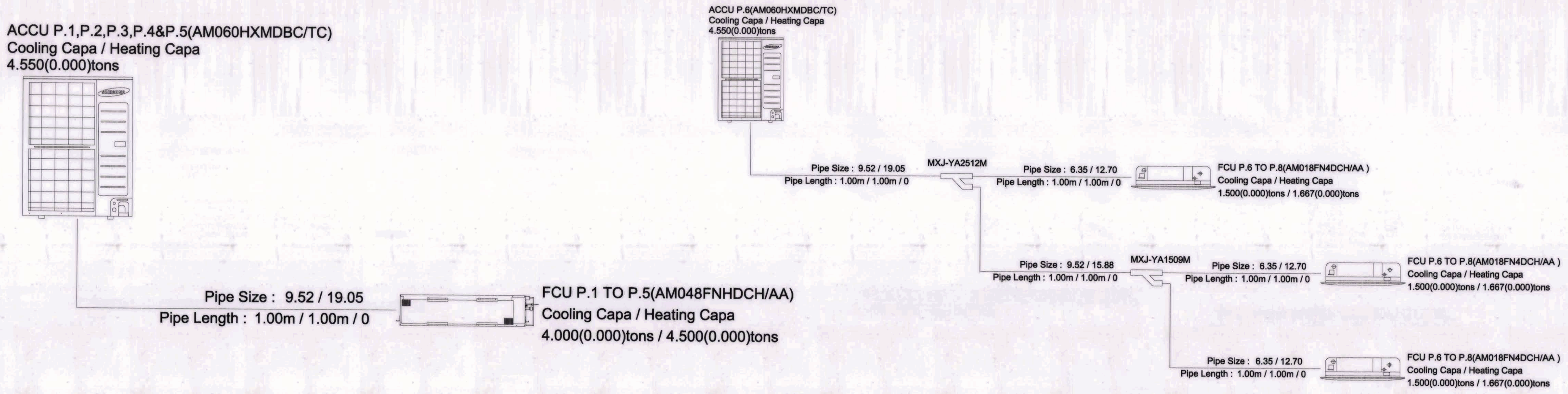
GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE NTS

N

OWNER; NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	UPPER GROUND REFRIGERANT PIPING SCHEMATIC DIAGRAM	M6-03



1 M6-04 — PRESIDENTIAL SUITE FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-P.1,P.2,P.3,P.4&P.5)

NOT TO SCALE

2 M6-04 — PRESIDENTIAL SUITE FLOOR REFRIGERANT PIPING DIAGRAM (ACCU-P.6)

NOT TO SCALE

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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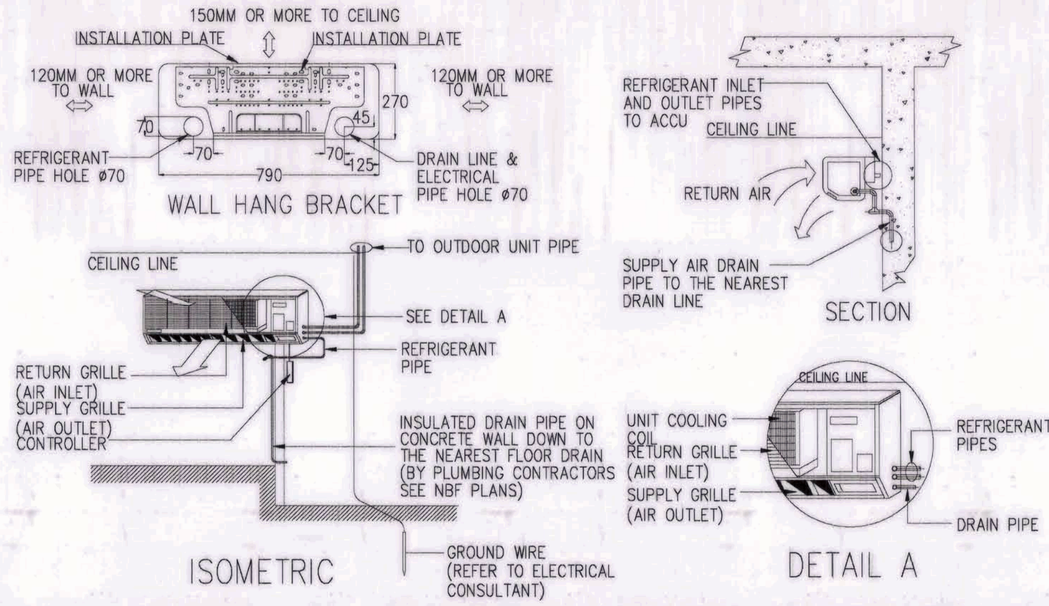
GRAPHIC SCALE:

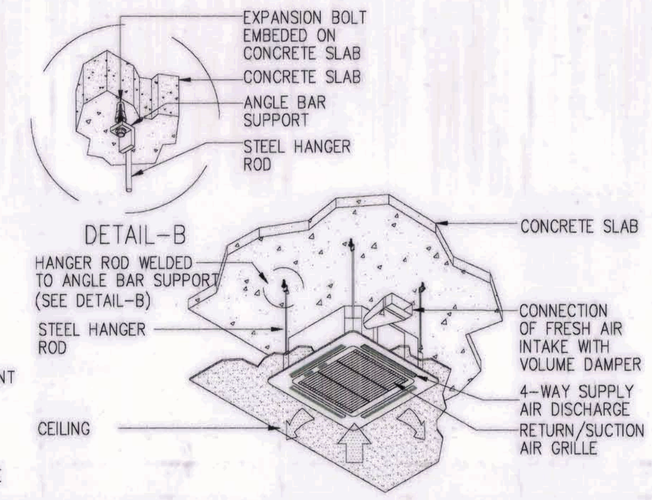
4000 2000 0 4000 10000
SCALE NTS

N

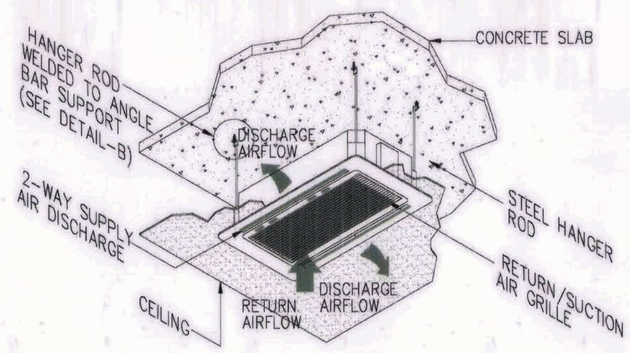
OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation, 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City — JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	PRESIDENTIAL SUITE REFRIGERANT PIPING SCHEMATIC DIAGRAM	M6-04



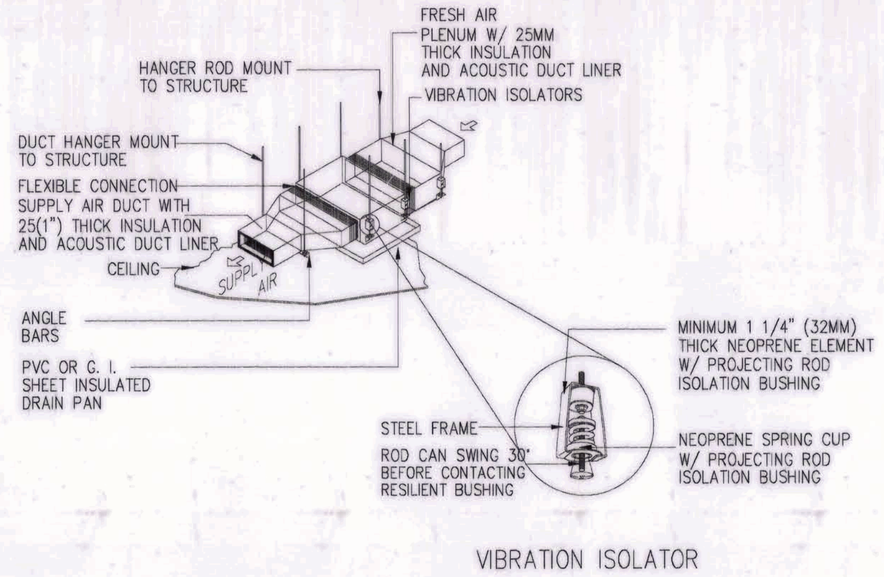
1 M7-01 **TYPICAL FCU WALL MOUNTED INSTALLATION DETAIL**
NOT TO SCALE



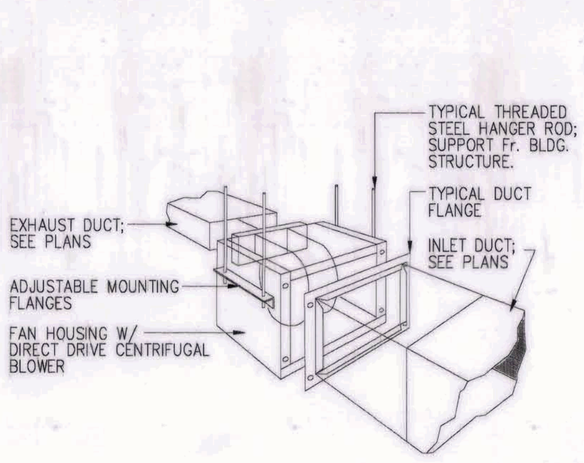
2 M7-01 **TYPICAL CEILING CASSETTE (4-WAY) FCU MOUNTING DETAIL**
NOT TO SCALE



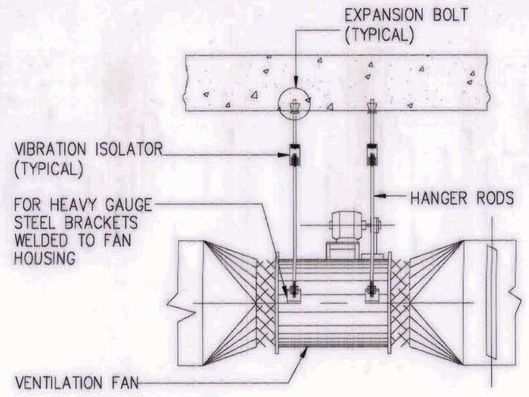
3 M7-01 **TYPICAL CEILING CASSETTE (DOUBLE FLOW) FCU MOUNTING DETAIL**
NOT TO SCALE



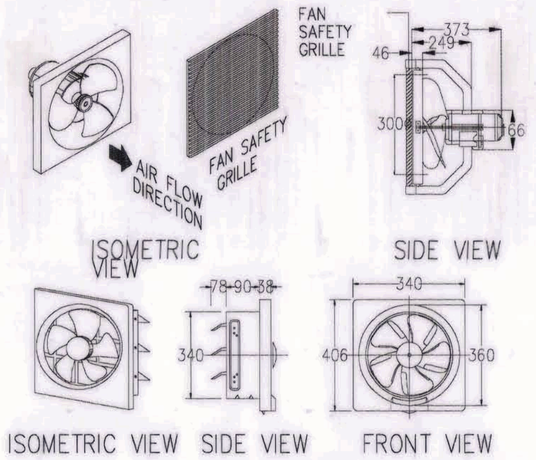
4 M7-01 **FRESH AIR INTAKE MOUNTING DETAIL**
NOT TO SCALE



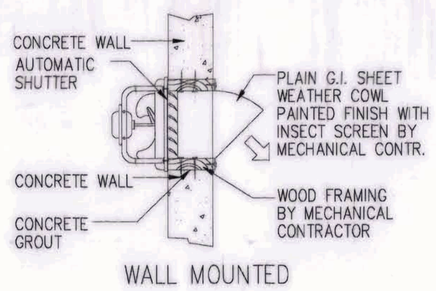
5 M7-01 **CABINET IN-LINE FAN DETAIL**
NOT TO SCALE



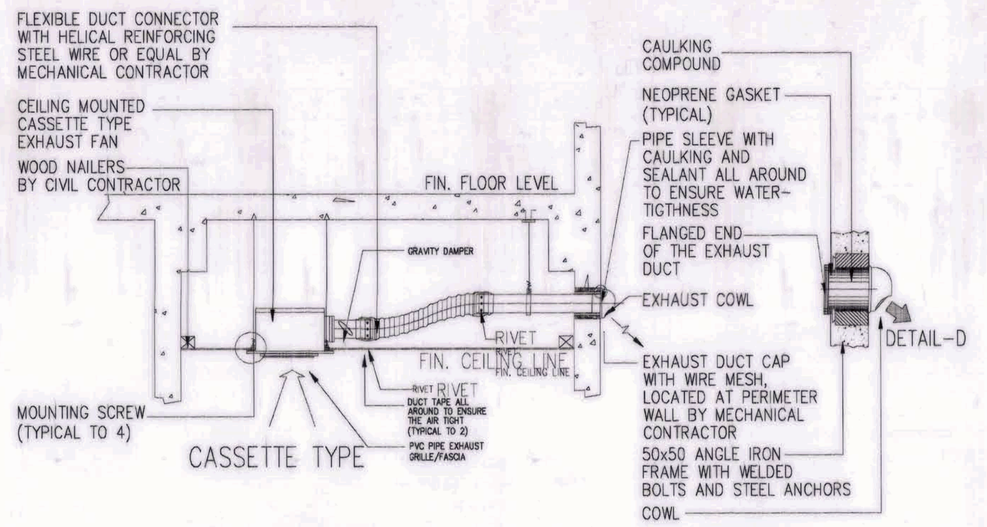
6 M7-01 **HORIZONTAL CEILING HUNG AXIAL FAN DETAIL**
NOT TO SCALE



NOTE:
EXPLOSION-PROOF MOTORS: UL APPROVED AND LABELED FOR HAZARD CLASSIFICATION, WITH OVER TEMPERATURE PROTECTION.



7 M7-01 **WALL MOUNTED EXHAUST FAN DETAIL**
NOT TO SCALE



8 M7-01 **CASSETTE TYPE EXHAUST FAN DETAIL**
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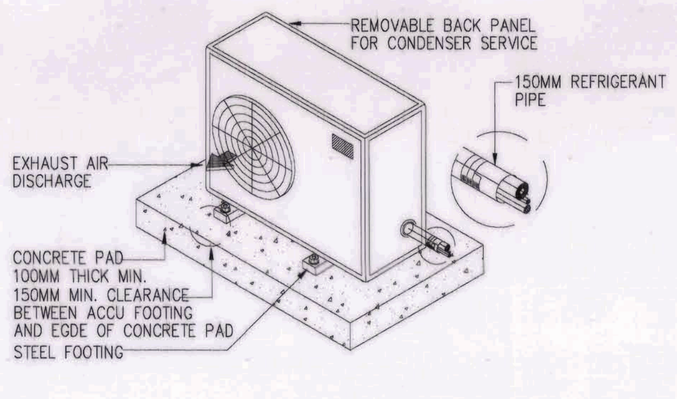
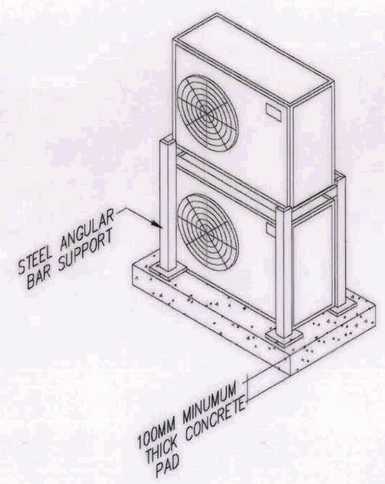


9 M7-01 **TYPICAL ACCU MOUNTING DETAIL**
NOT TO SCALE



10 M7-01 **ACCU ON TOP MOUNTING DETAIL**
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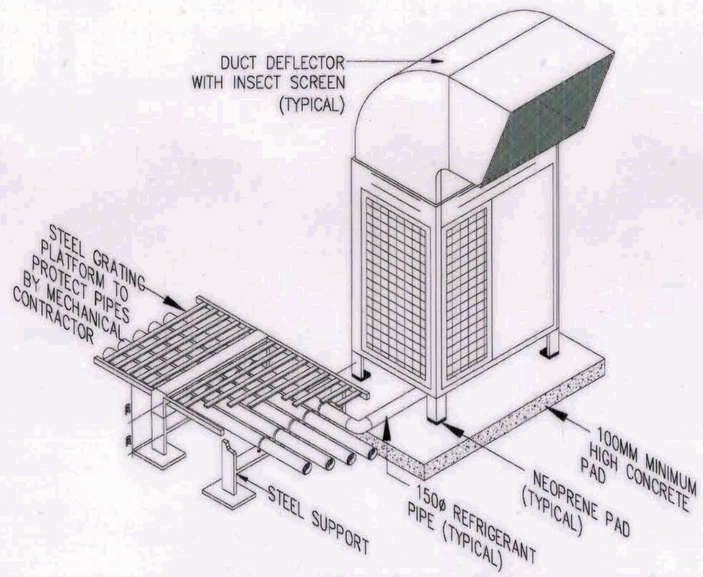
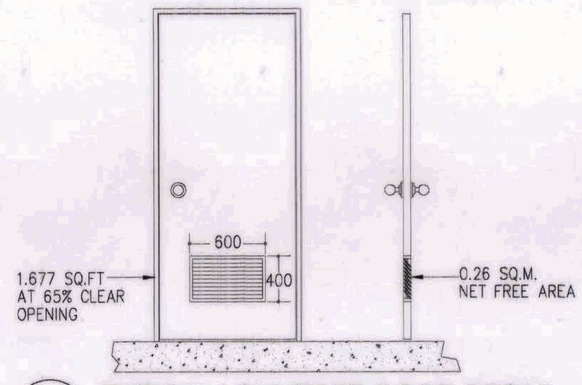


11 M7-01 **ACCU & REFRIGERANT PIPING STEEL GRATING MOUNTING DETAILS**
NOT TO SCALE



12 M7-01 **TYPICAL LOUVERED DOOR DETAIL**
NOT TO SCALE

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

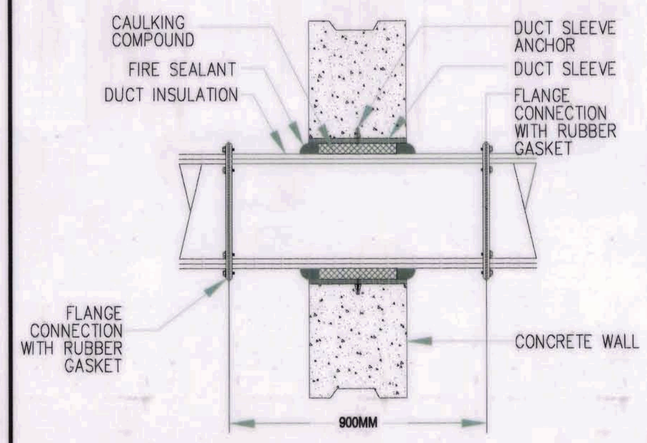
The Design Consultant shall be held fully responsible for the failure of the facilities/structures due to faulty design except for the changes made without the conformity of the Design Consultants.

GRAPHIC SCALE:

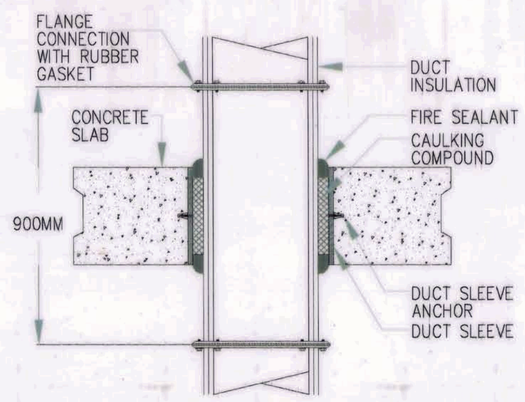
4000 2000 0 4000 10000
SCALE NTS

N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation, 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City — JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING; NGAC PHASE 1A; AQUATIC CENTER; NEW CLARK CITY, CAPAS, TARLAC	MISCELLANEOUS DETAIL	M7-01



1 M7-02 **DUCT THRU WALL DETAIL**
NOT TO SCALE



2 M7-02 **DUCT THRU FLOOR DETAIL**
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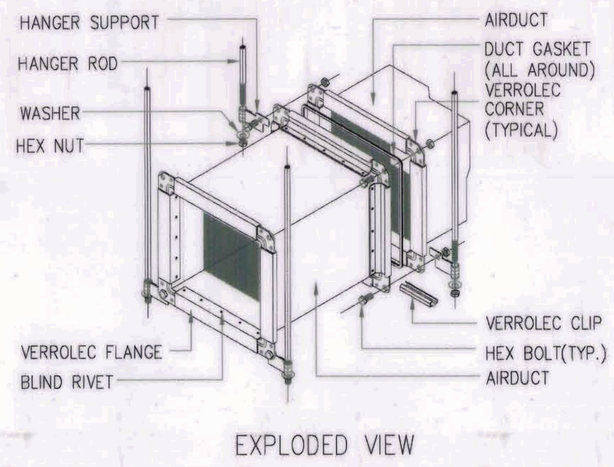
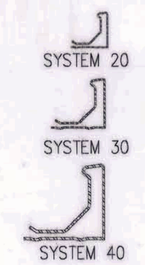
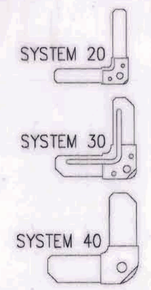


EXPLODED VIEW

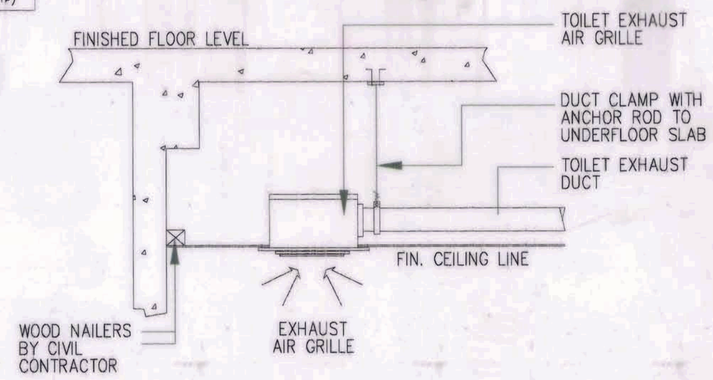
VERROLEC FLANGE AND CORNER SCHEDULE				
FLANGE SIZE	CORNER SIZE	DUCT SIZE	HANGER ROD	BOLT & NUT
SYSTEM 20	SYSTEM 20	100 - 900	3/8"ø(10mmø)	5/16"ø(8mmø)
SYSTEM 30	SYSTEM 30	950 - 2000	3/8"ø(10mmø)	3/8"ø(10mmø)
SYSTEM 40	SYSTEM 40	2050 - UP	1/2"ø(12mmø)	1/2"ø(12mmø)



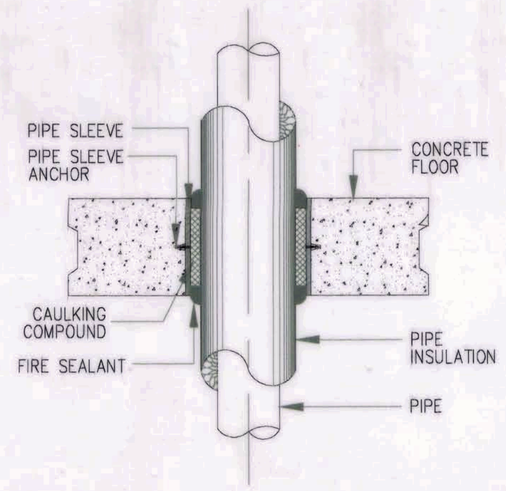


DUCT CORNER

3 M7-02 **AIR DUCT ASSEMBLY DETAIL**
NOT TO SCALE



4 M7-02 **EXHAUST AIR GRILLE INSTALLATION DETAIL**
NOT TO SCALE



5 M7-02 **PIPE THRU ROOF DETAIL**
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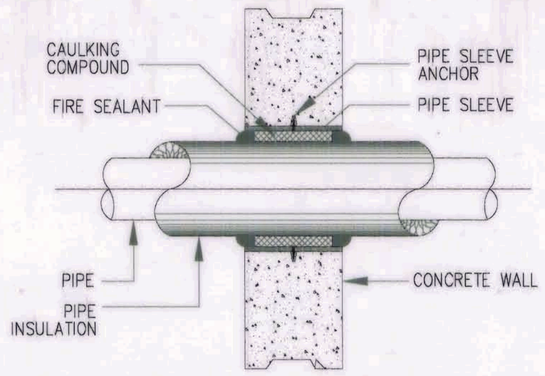
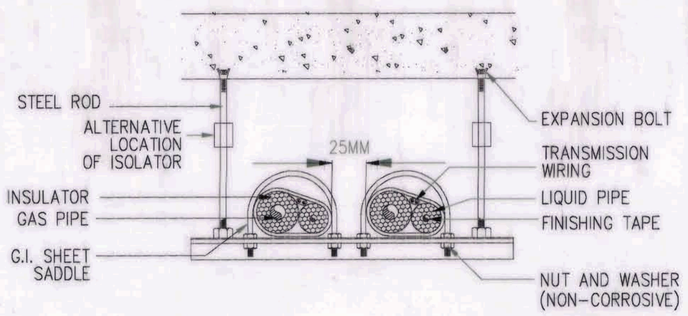


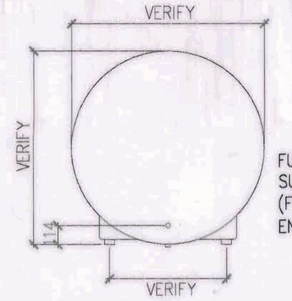
6 M7-02 **PIPE THRU WALL DETAIL**
NOT TO SCALE



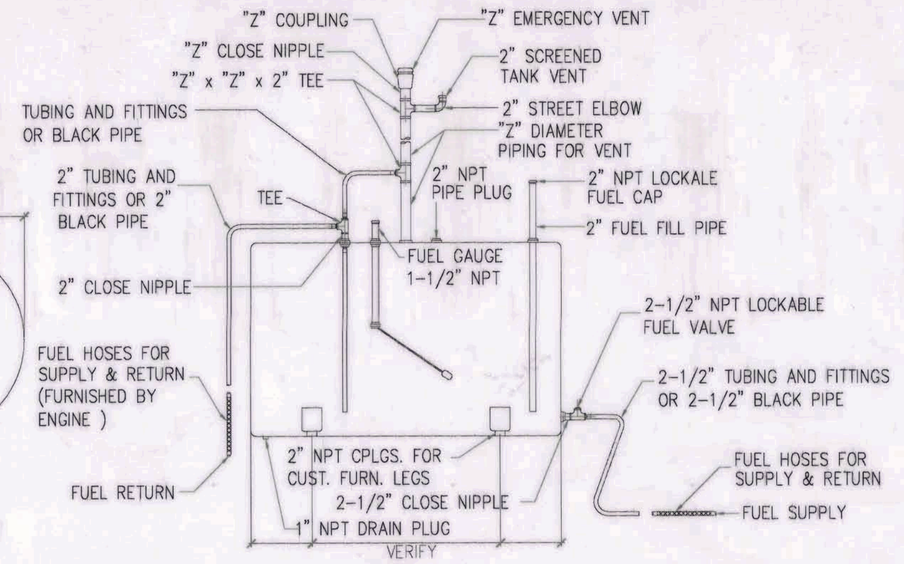
NOTE :
PROVIDE 25MM MINIMUM CLEARANCE BETWEEN ADJACENT PIPING OR OTHER SURFACE.

REFERENCE :
DAIKIN ENGINEERING DATA FOR R-410A REFRIGERANT PAGE 23 OF INSTALLATION MANUAL

7 M7-02 **REFRIGERANT PIPE HANGER DETAIL**
NOT TO SCALE

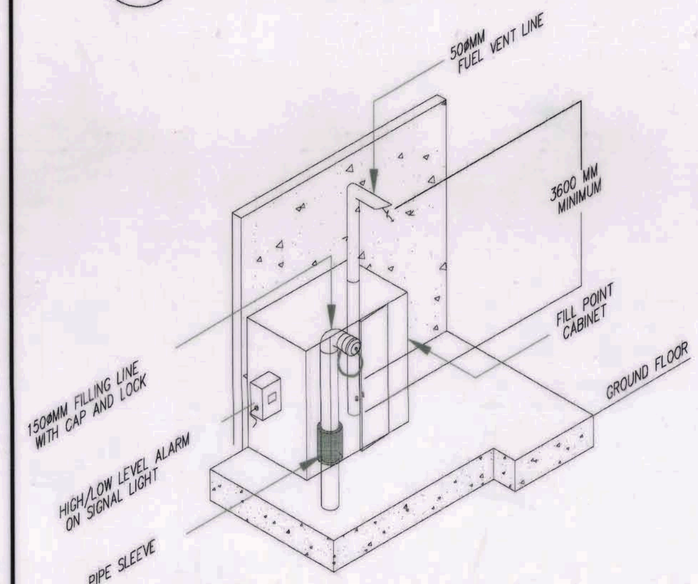


FRONT VIEW



RIGHT SIDE VIEW

8 M7-02 **TYPICAL FUEL DAY TANK DETAIL**
NOT TO SCALE



9 M7-02 **FUEL FILL LINE DETAIL**
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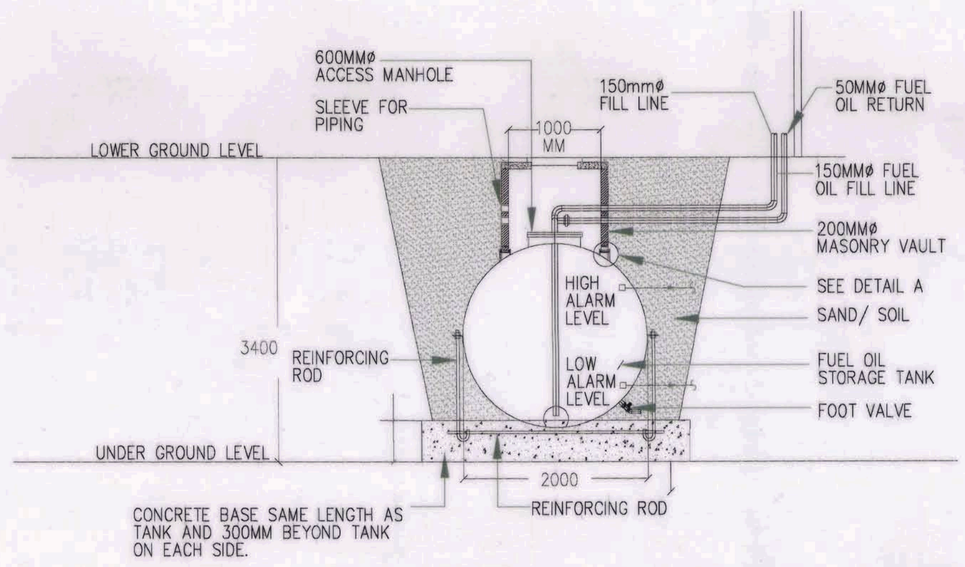

10 M7-02 **FUEL OIL STORAGE MOUNTING DETAILS**
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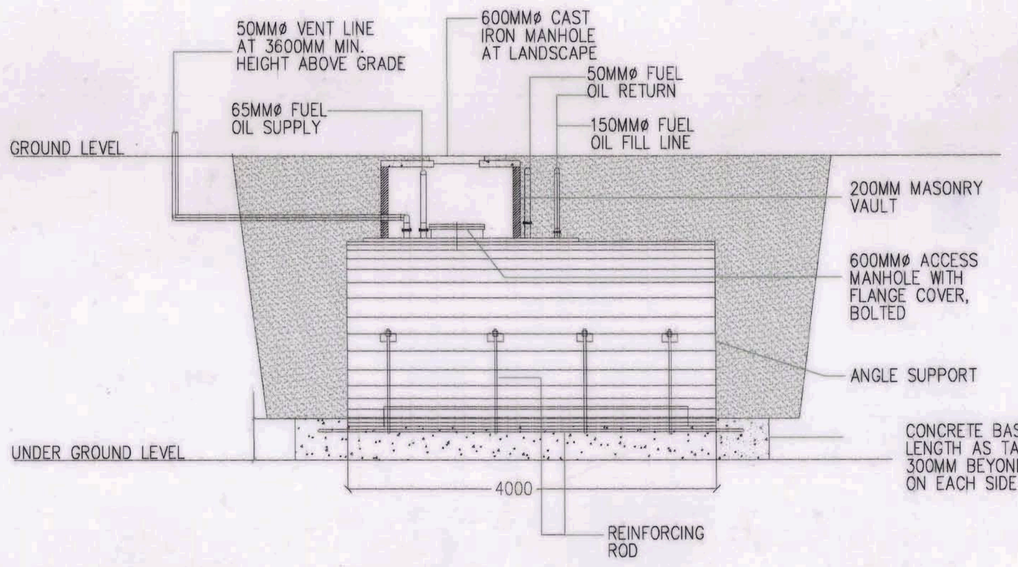

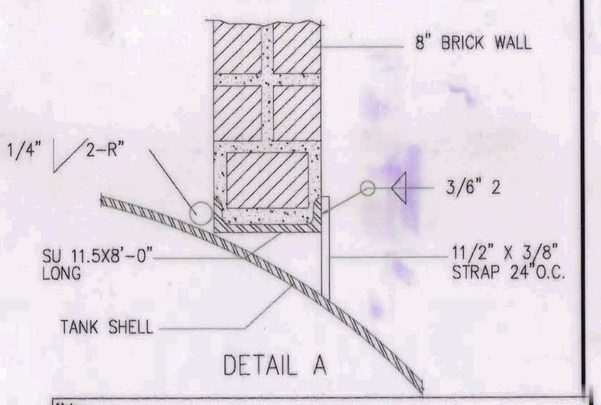

DETAIL A

Note:
Pursuant to Section 4 of Annex "A" of the Revised Implementing Rules and Regulations of R.A. 9184, approval of detailed engineering survey and design undertaken by Design Consultants neither diminishes the responsibility of the latter for the technical integrity of the surveys and designs nor transfer any part of that responsibility to the approving officials.

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GRAPHIC SCALE:

4000 2000 0 4000 10000
SCALE NTS

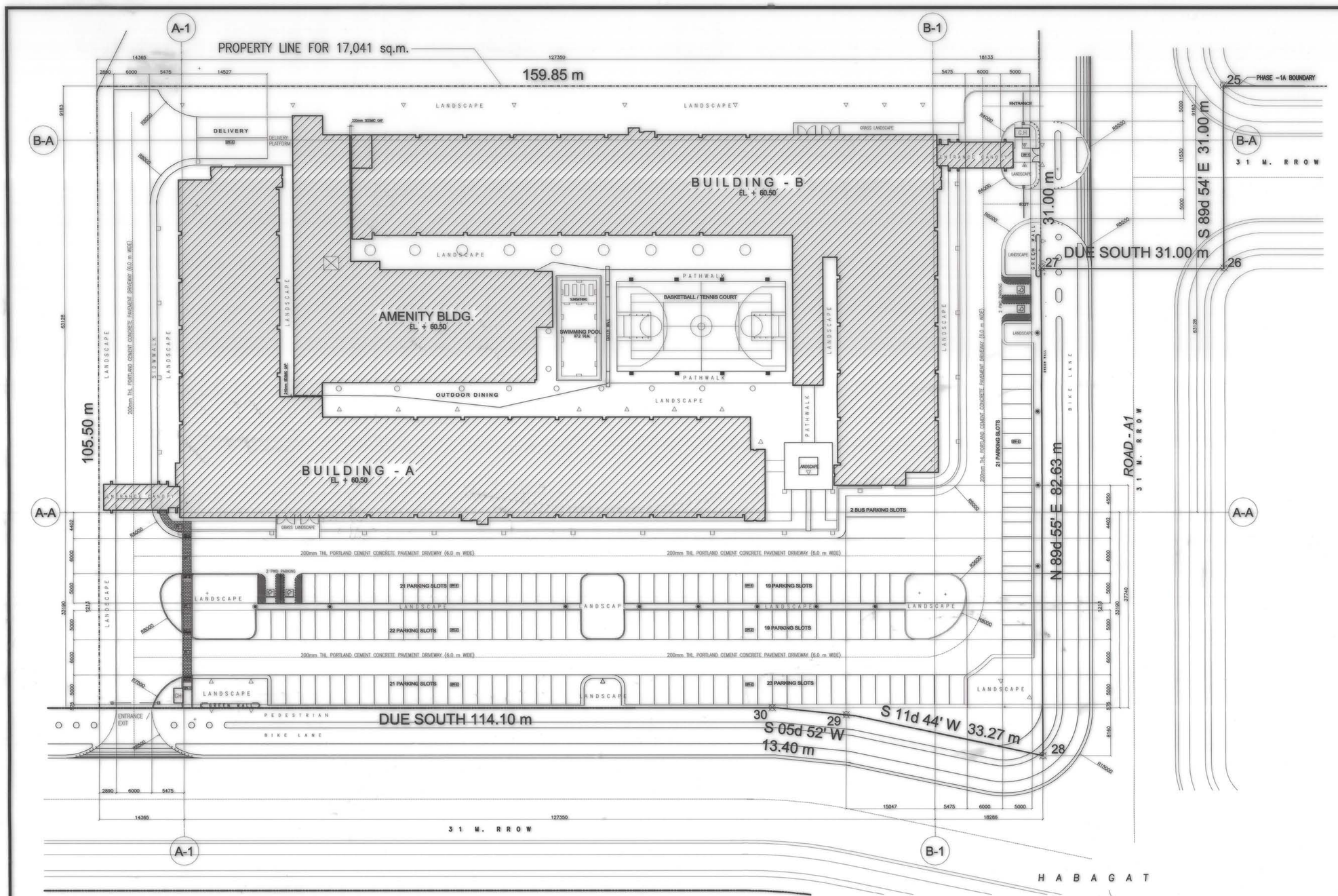
N

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	Hilmarc's Construction Corporation 1835 E. Rodriguez Sr., Avenue, Cubao, Quezon City JESUS V. HERBAS, PROJECT MANAGER	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A AQUATIC CENTER NEW CLARK CITY, CAPAS, TARLAC	MISCELLANEOUS DETAIL	M7-02

ATHLETES' VILLAGE

AS-BUILT

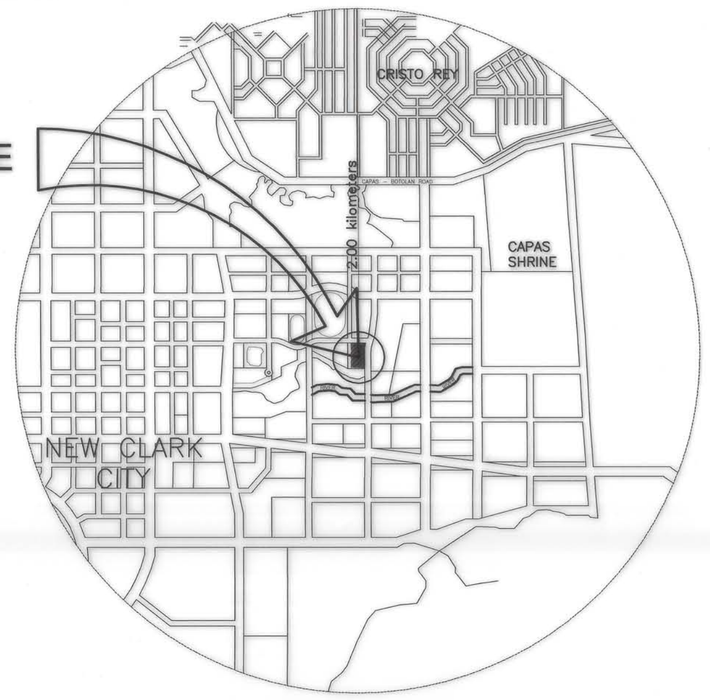
MECHANICAL PLANS



1 M-000 SITE DEVELOPMENT PLAN

3 M-000 LOCATION MAP

THE SITE



2 M-000 VICINITY MAP

TABLE OF CONTENTS

OWNER : NGAC PHASE I JV COMPANY
BCDA Bases Conversion and Development Authority — VIVENCIO B. DIZON, PRESIDENT
AND
MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT

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ZOILO S. DELA CRUZ
VICE PRESIDENT–OPERATION
REG No.: 0022657 | PTR No: 8118498
TIN No.: 116-426-274 | PLACE: MANILA
DATE: 01.20.2019

REVIEWED AND VALIDATED BY:
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ALFREDO R. REVILLA, PROJECT MANAGER

SUBMITTED BY:
BANDAR HEBAT BUILDERS, INC.
ISAAC S. DAVID, PRESIDENT

CERTIFIED BY: INDEPENDENT CONSULTANT
TCGI ENGINEERS
5th Flr. Felice Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16
VIRGILIO A. MADRAZO, PRESIDENT/CEO

PROJECT TITLE:
AS-BUILT DRAWING
NGAC PHASE 1A
ATHLETES VILLAGE
(AIR CONDITIONING & VENTILATION SYSTEM)
New Clark City, Capas, Tarlac

SHEET CONTENTS:
SITE DEVELOPMENT
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LOCATION MAP
VICINITY MAP

SHEET NO.
M-000

GENERAL NOTES :

1. ALL MECHANICAL WORKS HEREIN INCLUDED IN ACCORDANCE WITH THE LATEST ASHRAE AND SMACNA, UNIFORM MECH. CODE, PHILIPPINE MECHANICAL ENGINEERING CODE, AND NFPA 96 AS PER NATIONAL BUILDING CODE.
2. INSTALLATION OF ALL WORKS DONE IN A NEAT AND WORKMANLIKE MANNER . IMPROPER SETWORK OR FINISH AS DETERMINED BY THE ARCHITECT SHALL BE REMOVED AND REPLACED AT NO EXTRA COST.
3. ALL MECHANICAL WORKS EXECUTED IN CLOSED COORDINATED WITH THE OTHER TRADES.
4. ALL DIMENSIONS ARE IN MILLIMETER, UNLESS OTHERWISE SPECIFIED.
5. ALL PIPE SIZE ARE IN MM.
6. ALL MATERIALS TO BE USED WERE BRAND NEW AND CLEAN.
7. ALL POWER WIRING DONE BY THE ELECTRICAL CONTRACTOR.
8. ALL AIR-CONDITIONING DUCT AS PER SMACNA USING G.I SHEET GALVABOND MATERIALS AND FULLY INSULATED WITH CLOSE CELL ELASTOMERIC RUBBER INSULATIONS 25MM THICK. AND OR MINIMUM OF 19MM MIN. THICK FOR POLYOLEFIN INSULATION WITH REINFORCED ALUMINUM SHEETING AND ADHESIVE BACKING, CLASS 0 FIRE RATING.
9. FRESH AND EXHAUST AIR VENTILATING EQUIPMENTS FOR KITCHEN CONTROL PANEL SWITCH LOCATED NEAR AT THE COOKING AREA.
10. ALL FRESH AIR DUCT EXPOSED TO WEATHER WERE PAINTED WITH ANTI-CORROSIVE PAINT.USE EPOXY PRIMER FOR ALL APPLICATION.
11. SEAL TYPE ELECTRIC MOTOR FOR BLOWERS DRIVE. AND FOR KITCHEN EXHAUST BLOWER ARE SPARK - RESISTANT CONSTRUCTION.
12. ALL METAL SUPPORTS ARE FULLY WELDED.
13. ALL CONTROL WIRING WERE DONE BY THE CONTRACTOR INCLUDE LOAD SIDE.
14. POWER SUPPLY/WIRINGS FOR THE UNITS ARE BY THE ELECTRICAL CONTRACTOR.
15. ALL AIR-CONDITIONING UN IT WERE PROVIDED WITH REFRIGERANT FILTER DRIERS.
16. REFRIGERANT PIPING ARE TYPE "L" HARD DRAWN SEAMLESS COPPER PIPE HAS A THICKNESS OF 0.71 MM.
17. REFRIGERANT PIPE INSULATION WERE 25MM MIN. THICK. CLOSED CELL ELASTOMERIC RUBBER INSULATION FOR BRANCH RUN, AND 40MM FOR MAIN PIPE, OR USE 20MM MIN. THICK FOR POLYOLEFIN INSULATION WITH REINFORCED ALUMINUM SHEETING AND ADHESIVE BACKING, CLASS 0 FIRE RATING.
18. AC CONDENSATE DRAIN LINE WERE CLOSED CELL ELASTOMERIC RUBBER INSULATIONS 15MM MIN. THICK.
19. ANY REQUIREMENT NOT FOUND IN PSME CODE, THE MATERIALS, CONSTRUCTION AND INSTALLATION OF DUCTWORK COMPLIED WITH THE REQUIREMENT OF SMACNA OR ASHRAE.
20. ALL DUCTWORKS CONFORMED WITH THE PHILIPPINE MECHANICAL ENGINEERING CODE, AMERICAN STANDARDS FOR TESTING MATERIALS,AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS, AIR CONDITIONING AND REFRIGERATION INSTITUTE,NATIONAL FIRE PROTECTION ASSOCIATION, SHEET METAL AND AIRCONDITIONING CONTRACTORS, NATIONAL ASSOCIATION, BUILDING OFFICIALS, AND CODE ADMINISTRATORS, INTERNATIONAL, MANUFACTURERS STANDARDIZATION, SOCIETY OF VALVES AND FITTINGS INDUSTRY, INC., AND OTHER LOCAL AND INTERNATIONAL CODES PERTINENT TO THIS WORKS.
21. ALL AIR-CONDITIONING, FRESH AIR AND EXHAUST VENTILATION DUCTS ARE OF 653 ASTM HOT DIPPED, ZINC COATED STEEL SHEET CONFIRMING TO SMACNA STANDARDS AND LOCK FORMED AND SEALED WITH DUCT SEALANT CONFORMING TO ASTM E 84.
22. KITCHEN EXHAUST DUCT WERE MADE OF ASTM 653 BLACK STEEL (B.I) SHEET WITH A MINIMUM THICKNESS OF 1.2MM (GA. 18) FULL WELDED ON DUCT CONNECTIONS. KED WERE INSULATED WITH 25MM THICK FIBER GLASS BOARD WITH ALUMINUM FOIL VAPOR BARRIER WITH A DENSITY OF ATLEAST 48 Kg per cubic meter (3PCF). PROVIDE SERVICE HOLES/ACCESS DOOR FOR CLEANING.
23. PRIOR TO INSULATION, ALL DUCTWORKS WERE SMOKE OR LIGHT TESTED AND WERE WITNESSED BY AUTHORIZED REPRESENTATIVE.
24. PROVIDED CONTINUOUS CORNER BENDS ON ALL DUCTS MADE OF 0.6MM ASTM 653 HOT DIPPED, ZINC COATED STEEL SHEET, PROPERLY FASTENED WITH PLASTIC STRAPS EVERY 300MM.
25. ALL HVAC WORKS WERE SUPERVISED IN A REGISTERED MECHANICAL ENGINEER OF GOOD STANDING.
26. PROVIDED SECONDARY DRAIN PAN FOR CEILING CONCEALED AHU/FCU AND REFER TO MANUFACTURE STANDARD FOR THE REFRIGERANT ACCEPTABLE PIPE SIZES WITH RESPECT TO LENGTH OF THE PIPING.
26. AIRCONDITIONING UNIT CMD/FAHU/AHU RETURN AIR FILTERS PROVIDED BY MANUFACTURER.
27. THESE DRAWING WERE DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL NECESSARY PIPING OFFSET OR FITTINGS. THE CONTRACTOR INSTALLED MATERIALS AND EQUIPMENTS IN A MANNER AS TO CONFORMED TO STRUCTURE, AVOID OBSTRUCTION, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. ALL INSTALLATION WERE CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS. THE CONTRACTORS HAS NOTIFY THE MANAGING OFFICE IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT WOULD AFFECT THE SYSTEM PERFORMANCE OR WHICH WOULD INCUR ADDITIONAL COSTS. THIS NOTIFICATION WERE MADE BY PRIOR TO THE INSTALLATION OF THE ITEMS AND EQUIPMENTS CONCERNED.

LEGEND, SYMBOLS, & ABBREVIATIONS :

LEGEND, SYMBOLS & ABBREVIATION:

SYMBOL/ ABBREVIATION	DESCRIPTION
	EQUIPMENT TAG
FCU	FCU: 4-WAY CEILING CASSETTE
FCU	FCU: WALL MOUNTED
ACCU	AIR COOLED CONDENSING UNIT
WAC	WINDOW-TYPE AIRCON UNIT
	CEILING MOUNTED DUCT-TYPE
CEF TEF	CASSETTE TYPE/TOILET EXHAUST FAN
KED	EXHAUST HOOD DUCT - RISER (B.I MATERIAL),
	SINGLE DEF. EXHAUST AIR GRILLE
UP DOWN	SUPPLY AIR DUCT RISER PRESSURIZATION AIR DUCT RISER FRESH AIR DUCT RISER
UP DOWN	EXHAUST AIR DUCT RISER SMOKE EXTRACTION DUCT RISER KED RISER
CF	CEILING AND ORBIT FAN
	4-WAY DIFFUSER
	TOILET EXHAUST AIR GRILLE
	SMOKE EXTRACTION AIR GRILLES
WMEF	WALL-MOUNTED FAN
LD	LOUVER DOOR - DIRECTION (INTAKE)
AD	DUCTING ACCESS DOOR
FD	FIRE DAMPER
	SIDE THROW AIR GRILLE

ABBREVIATION	DESCRIPTION
ACCU	AIR COOLED CONDENSING UNIT
ACU	AIRCONDITIONING UNIT
BTU	BRITISH THERMAL UNIT
CEF	CEILING EXHAUST FAN
CDP	CONDENSATE DRAIN PIPE
CFM	CUBIC FEET PER MINUTE
CMH	CUBIC METER PER HOUR
EAD	EXHAUST AIR DUCT
EAG	EXHAUST AIR GRILLE
EAF	EXHAUST AIR FAN
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
FAG	FRESH AIR GRILLE
FAD	FRESH AIR DUCT
FAB	FRESH AIR BLOWER
FAF	FRESH AIR FAN
FAHU	FRESH AIR HANDLING UNIT
FCU	FAN COIL UNIT
HKEF	HOUSEKEEPING EXHAUST FAN
HP	HORSEPOWER
IWG	INCH OF WATER GAUGE
KED	KITCHEN EXHAUST DUCT
KEG	KITCHEN EXHAUST GRILLE
KEB	KITCHEN EXHAUST BLOWER
OBVD	OPPOSED BLADE VOLUME DAMPER
ODU	OUTDOOR UNIT
Pa	PASCAL
PAD	PRESSURIZATION AIR DUCT
PAG	PRESSURIZATION AIR GRILLE
PAF	PRESSURIZATION AIR FAN
PEF	PANTRY EXHAUST FAN
RAG	RETURN AIR GRILLE
SAD	SUPPLY AIR DUCT
SEF	SMOKE EXTRACTION FAN
SEG	SMOKE EXTRACTION GRILLE
SED	SMOKE EXTRACTION DUCT
SD	SPLITTER DAMPER
TYP.	TYPICAL
TR	TONS OF REFRIGERATION
TEF	TOILET EXHAUST FAN
VD	VOLUME DAMPER
VRF/VRV	VARIABLE REFRIGERANT FLOW/VOLUME
WSAF	WALL MOUNTED SUPPLY AIR FAN
WEF	WALL MOUNTED EXHAUST FAN

EQUIPMENT CONTROLLER SYMBOLS:

SYMBOL/ ABBREVIATION	DESCRIPTION
RC	WALL MOUNTED REMOTE CONTROLLER - WIRELESS
T	WALL MOUNTED THERMOSTAT - ACU WIRED CONTROLLER
EC	ELECTRONIC SINGLE PHASE SPEED CONTROLLER (KRUGER)
IS EF	ISOLATION SWITCH/ EXHAUST OR FRESH AIR FAN SWITCH
IB IB	ISOLATION CIRCUIT BREAKER
OF	OCILLATING FAN INDEPENDENT SWITCH (4 -SPEED)
CF	CEILING FAN INDEPENDENT SWITCH (4-SPEED)
MCP	MOTOR CONTROL PANEL
DPS	DIFFERENTIAL PRESSURE SENSOR
DPC	DIFFERENTIAL PRESSURE CONTROLLER
SD	SMOKE DETECTOR (BY - ECE/EE)
NO NO M	NORMALLY OPEN MOTORIZED DAMPER
NC NC M	NORMALLY CLOSED MOTORIZED DAMPER
PS	POWER SUPPLY (BY -EE)

PIPE DESIGNATION:

— — — — BELOW GRADE/UNDERGROUND PIPE

———— NORMAL PIPE LAYOUT

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO ZOILO S. DELA CRUZ, VICE PRESIDENT - OPERATION REG No.: 0022657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	GENERAL NOTES, LEGEND, SYMBOLS, & ABBREVIATION	M-001

EQUIPMENT SCHEDULE: AIRCONDITIONING UNITS

BUILDING A - VRF/VRV, R410A AIRCONDITIONING UNITS

EQUIPMENT TAG OR UNIT DESIGNATION	SYSTEM	QUANTITY	UNITS	LOCATION OR AREA SERVED	DESIGN COOLING		TOTAL COOLING	DESIGN AIRFLOW	MANUFACTURER SELECTED CAPACITY				ELECTRICAL CHARACTERISTICS				TYPE L,HD SEAMLESS REF. PIPE SIZE LIQUID/GAS (MM)	CONDENSATE DRAIN PIPE SIZE (INTERNAL) (MM)	UNIT DESCRIPTION
					SENSIBLE	LATENT			INDOOR		OUTDOOR		POWER CONSUMPTION (KW)	VOLTS	PHASE	CYCLE			
					BTU/HR	BTU/HR	BTU/HR	CFM	AIRFLOW H/M/L (CMM)	COOLING HP	AIRFLOW CMM	COOLING BTU/HR							
VRF-ODU/01-RD-A1	VRF OUTDOOR-1	1	UNIT	ROOF DECK BLDG-A							178	95,500	6.84	400	3	60	9.5ø/22.5ø	–	VRV A – OUTDOOR UNIT
VRF-CMD/01-GF-A1	INDOOR UNIT	1	UNIT	LOBBY, GROUND FLOOR BLDG-A	37,445	6,336	43,800	1,853	39/33/28	5.0			0.283	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED DUCT-TYPE
VRF-WM/05-GF-A2	INDOOR UNIT	1	UNIT	ELECTRONICS ROOM, GROUND FLR BLDG-A	16,304	776	17,100	935	15/12	2.0			0.033	220	1	60	6.4ø/12.7ø	13.0 ø	WALL MOUNTED TYPE
VRF-WM/01-GF-A3	INDOOR UNIT	1	UNIT	DOCTOR'S ROOM, GROUND FLOOR BLDG-A	3,918	607	4,500	204	7.5/4.5	0.8			0.019	220	1	60	6.4ø/12.7ø	13.0 ø	WALL MOUNTED TYPE
VRF-WM/01-GF-A4	INDOOR UNIT	1	UNIT	NURSE ROOM, GROUND FLOOR BLDG-A	4,141	913	5,100	203	7.5/4.5	0.8			0.019	220	1	60	6.4ø/12.7ø	13.0 ø	WALL MOUNTED TYPE
VRF-WM/02-GF-A5	INDOOR UNIT	1	UNIT	PATIENT ROOM, GROUND FLOOR BLDG-A	7,409	704	8,100	381	8.0/5.0	1.0			0.028	220	1	60	6.4ø/12.7ø	13.0 ø	WALL MOUNTED TYPE
										TOTAL (9.6)									
VRF-ODU/02-RD-A2	VRF OUTDOOR-2	1	UNIT	ROOF DECK BLDG-A							257	152,900	12.9	400	3	60	12.7ø/28.6ø	–	VRV A – OUTDOOR UNIT
VRF-CMD/02-GF-A1; VRF-CMD/02-GF-A2; VRF-CMD/02-GF-A3	INDOOR UNIT	3	UNITS	EXERCISE ROOM, GROUND FLOOR BLDG-A	57,885/3	18,877/3	76,800/3	2,899/3	25/22.5/20	3.2			0.184	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED DUCT-TYPE
VRF-FAHU-GF-A1	INDOOR UNIT	1	UNIT	EXERCISE ROOM, GROUND FLOOR BLDG-A	7,627	6,002	13,629	356.64	18	5.0			0.359	220	1	60	9.5ø/15.9ø	25.0 ø	FRESH AIR HANDLING UNIT DUCT-TYPE
										TOTAL (15)									
VRF-ODU/03-RD-A3	VRF OUTDOOR-3	1	UNIT	ROOF DECK FOR 2ND-5TH FLOOR BLDG-A							257	172,000	12.9	400	3	60	12.7ø/28.6ø	–	VRV A – OUTDOOR UNIT
VRF-CMD/04-2F-A1; VRF-CMD/04-3F-A1; VRF-CMD/04-4F-A1	INDOOR UNIT	3	UNITS	CONFERENCE ROOMS, 2ND-4TH FLR BLDG-A	27,809	6,426	34,200	1,382	32/27/23	4.0			0.214	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED DUCT-TYPE
VRF-CMD/05-5F-A1	INDOOR UNIT	1	UNIT	CONFERENCE ROOM, 5TH FLR BLDG-A	36,054	6,608	42,700	1,790	39/33/28	5.0			0.283	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED DUCT-TYPE
										TOTAL (17)									

BUILDING B - VRF/VRV, R410A AIRCONDITIONING UNITS

EQUIPMENT TAG OR UNIT DESIGNATION	SYSTEM	QUANTITY	UNITS	LOCATION OR AREA SERVED	DESIGN COOLING		TOTAL COOLING	DESIGN AIRFLOW	MANUFACTURER SELECTED CAPACITY				ELECTRICAL CHARACTERISTICS				TYPE L,HD SEAMLESS REF. PIPE SIZE LIQUID/GAS (MM)	CONDENSATE DRAIN PIPE SIZE (MM)	UNIT DESCRIPTION
					SENSIBLE	LATENT			INDOOR		OUTDOOR		POWER CONSUMPTION (KW)	VOLTS	PHASE	CYCLE			
					BTU/HR	BTU/HR	BTU/HR	CFM	AIRFLOW H/M/L (CMM)	COOLING HP	AIRFLOW CMM	COOLING BTU/HR							
VRF-ODU/04-RD-B1	VRF OUTDOOR-4	1	UNIT	ROOF DECK BLDG-B							178	76, 400	5.17	400	3	60	9.5ø/19.1ø	–	VRV A – OUTDOOR UNIT
VRF-CMD/01-GF-B1	INDOOR UNIT	1	UNIT	LOBBY, GROUND FLOOR BLDG-B	42,080	6,450	48,500	2,094	46/39/32	6.0			0.404	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED DUCT-TYPE
VRF-WM/05-GF-B1	INDOOR UNIT	1	UNIT	ELECTRONICS ROOM, GROUND FLR BLDG-B	16,304	776	17,100	935	15/12	2.0			0.033	220	1	60	6.4ø/12.7ø	13.0 ø	WALL MOUNTED TYPE
										TOTAL (8.0)									
VRF-ODU/05-RD-B2	VRF OUTDOOR-5	1	UNIT	ROOF DECK BLDG-B							257	152,900	12.9	400	3	60	12.7ø/28.6ø	–	VRV A – OUTDOOR UNIT
VRF-CMD/02-GF-B1; VRF-CMD/02-GF-B2; VRF-CMD/02-GF-B3	INDOOR UNIT	3	UNITS	EXERCISE ROOM, GROUND FLOOR BLDG-B	52,697/3	18,575/3	71,300/3	2,615/3	25/22.5/20	3.2			0.184	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED DUCT-TYPE
VRF-FAHU-GF-A1	INDOOR UNIT	1	UNIT	EXERCISE ROOM, GROUND FLR BLDG-B	7,627	6,002	13,629	356.64	18	5.0			0.359	220	1	60	9.5ø/15.9ø	25.0 ø	FRESH AIR HANDLING UNIT DUCT-TYPE
										TOTAL (15)									
VRF-ODU/06-RD-B3	VRF OUTDOOR-6	1	SET	ROOF DECK BLDG-B							257	172,000	13.9	400	3	60	15.9ø/28.6ø	–	VRV A – OUTDOOR UNIT
	COMBINATION UNITS																		
VRF-ODU6A-RD-B4	OUTDOOR 6A	1	UNIT										5.17	400	3	60	9.5ø/19.1ø		
VRF-ODU6B-RD-B4	OUTDOOR 6B	1	UNIT										33.5	400	3	60	12.7ø/28.6ø		
VRF-CMD/04-2F-B1; VRF-CMD/04-3F-B1; VRF-CMD/04-4F-B1	INDOOR UNIT	3	UNITS	CONFERENCE ROOMS, 2ND-4TH FLR BLDG-B	30,387	6,476	36,900	1,499	39/33/28	5.0			0.283	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED DUCT-TYPE
VRF-CMD/05-5F-B1	INDOOR UNIT	1	UNIT	CONFERENCE ROOM, 5TH FLR BLDG-B	38,004	6,679	44,700	1,949	39/33/28	5.0			0.283	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED DUCT-TYPE
										TOTAL (20)									

BUILDING C - VRF/VRV, R410A AIRCONDITIONING UNITS

EQUIPMENT TAG OR UNIT DESIGNATION	SYSTEM	QUANTITY	UNITS	LOCATION OR AREA SERVED	DESIGN COOLING		TOTAL COOLING	DESIGN AIRFLOW	MANUFACTURER SELECTED CAPACITY				ELECTRICAL CHARACTERISTICS				TYPE L,HD SEAMLESS REF. PIPE SIZE LIQUID/GAS (MM)	CONDENSATE DRAIN PIPE SIZE (MM)	UNIT DESCRIPTION
					SENSIBLE	LATENT			INDOOR		OUTDOOR		POWER CONSUMPTION (KW)	VOLTS	PHASE	CYCLE			
					BTU/HR	BTU/HR	BTU/HR	CFM	AIRFLOW H/M/L (CMM)	COOLING HP	AIRFLOW CMM	COOLING BTU/HR							
VRF-ODU/07-RD-C1	VRF OUTDOOR-7	1	SET (2UNITS)	ROOF DECK BLDG-C							297+297	382,200	35.4	400	3	60	19.1ø/41.3ø	–	VRV A – OUTDOOR UNIT
	COMBINATION UNITS																		
VRF-ODU/7A-RD-C2	OUTDOOR 7A	1	UNIT								297	248,400	17.7	400	3	60	15.9ø/28.6ø		
VRF-ODU/7B-RD-C3	OUTDOOR 7B	1	UNIT								297	133,800	17.7	400	3	60	15.9ø/28.6ø		
VRF-CMD/05-GF-C1; VRF-CMD/05-GF-C2; VRF-CMD/05-GF-C3;VRF-CMD/05-GF-C4; VRF-CMD/05-GF-C5	INDOOR UNIT	5	UNITS	ATHLETE'S DINING AREA, GRND FLR BLDG-C	228,417/5	119,609/5	348,000/5	9,105/5	58/50	8.0			1.49	220	1	60	9.5ø/19.1ø	25.0 ø	CEILING MOUNTED DUCT-TYPE
VRF-WM/01-KOA/GF-C1	INDOOR UNIT	1	UNIT	KITCHEN OFFICE AREA, GRND FLR BLDG-C	3,561	625	4,200	182	7.5/4.5	0.8			0.019	220	1	60	6.4ø/12.7ø	13.0 ø	WALL MOUNTED TYPE
										TOTAL (40.8)									
VRF-ODU/08-RD-C2	VRF OUTDOOR-8	1	UNIT	ROOF DECK BLDG-C							257	152,900	12.9	400	3	60	12.7ø/28.6ø	–	VRV A – OUTDOOR UNIT
VRF-CMC/04-2F-C1; VRF-CMC/04-2F-C2	INDOOR UNIT	2	UNITS	LIBRARY READING AREA, SECOND FLOOR BLDG-C	2,8529/2	6,937/2	35,500/2	1,366/2	18/17/13.5 /12.5/11	2.0			0.040	220	1	60	6.4ø/12.7ø	25.0 ø	CEILING MOUNTED CASSETTE TYPE
VRF-CMC/05-2F-C1	INDOOR UNIT	1	UNIT	COMPUTER AREA, SECOND FLOOR BLDG-C	28,136	3,984	32,100	1,399	32/29/26 /26/23	4.0			0.158	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED CASSETTE TYPE
VRF-CMC/03-2F-C1	INDOOR UNIT	1	UNIT	LIBRARIAN'S OFFICE, SECOND FLR BLDG-C	13,043	1,092	14,100	696	17/13.5/13 /12/11	1.6			0.036	220	1	60	6.4ø/12.7ø	25.0 ø	CEILING MOUNTED CASSETTE TYPE
VRF-FAHU-2F-C1	INDOOR UNIT	1	UNIT	HALLWAY / 2F VARIOUS OFFICES – BLDG-C	13,622	10,721	24,343	637	18	5.0			0.359	220	1	60	9.5ø/15.9ø	25.0 ø	FRESH AIR HANDLING UNIT DUCT-TYPE
										TOTAL (14.6)									
VRF-ODU/09-RD-C3	VRF OUTDOOR-9	1	UNIT	SECOND FLOOR BLDG-C	13,622	10,721	24,343	637			257	133,800	10.7	400	3	60	12.7ø/28.6ø		VRV A – OUTDOOR UNIT
VRF-CMC/07-2F-C1	INDOOR UNIT	1	UNIT	ADMINISTRATION, SECOND FLOOR BLDG-C	29,474	3,217	32,700	1,500	32/29/26 /26/23	4			0.158	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED CASSETTE TYPE
VRF-CMC/02-2F-C1	INDOOR UNIT	1	UNIT	OFFICE-1, SECOND FLOOR BLDG-C	9,302	1,064	10,400	482	13/12.5/11.5 /11/10	1.25			0.029	220	1	60	6.4ø/12.7ø	25.0 ø	CEILING MOUNTED CASSETTE TYPE
VRF-CMC/01-2F-C1	INDOOR UNIT	1	UNIT	OFFICE-2, SECOND FLOOR BLDG-C	8,414	1,053	9,500	431	13/12.5/11.5 /11/10	1.25			0.029	220	1	60	6.4ø/12.7ø	25.0 ø	CEILING MOUNTED CASSETTE TYPE
VRF-CMC/04-2F-C1	INDOOR UNIT	1	UNIT	OFFICE-3, SECOND FLOOR BLDG-C	13,258	988	14,200	706	17/13.5/13 /12/11	1.6			0.036	220	1	60	6.4ø/12.7ø	25.0 ø	CEILING MOUNTED CASSETTE TYPE
VRF-CMC/04-2F-C2	INDOOR UNIT	1	UNIT	LOUNGE/RECEPTION AREA, SECOND FLR BLDG-C	10,043	1554	11,600	513	17/13.5/13 /12/11	1.6			0.036	220	1	60	6.4ø/12.7ø	25.0 ø	CEILING MOUNTED CASSETTE TYPE
VRF-CMC/07-2F-C2	INDOOR UNIT	1	UNIT	CONFERENCE ROOM, SECOND FLOOR BLDG-C	30,483	7,681	38,200	1,451	33/30.5/28 /25.5/21	5.0			0.178	220	1	60	9.5ø/15.9ø	25.0 ø	CEILING MOUNTED CASSETTE TYPE
										TOTAL (14.7)									

NOTE: EQUIPMENT SELECTION AS PER DAIKIN VRV XPRESS SOFTWARE AND PROJECT BOD INDOOR CONDITION 75 DBT & 55% RH

OWNER : NGAC PHASE I JV COMPANY

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AND

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PRESIDENT/CEO

PROJECT TITLE:

AS-BUILT DRAWING
NGAC PHASE 1A
ATHLETES VILLAGE
(AIR CONDITIONING & VENTILATION SYSTEM)
New Clark City, Capas, Tarlac

SHEET CONTENTS:

SCHEDULE OF AIRCONDITIONING
EQUIPMENTS - VRF/VRV SYSTEM

SHEET NO.

M-002

EQUIPMENT SCHEDULE: AIRCONDITIONING UNITS

BUILDING A - R410A WINDOW TYPE AIRCONDITIONING UNITS

EQUIPMENT TAG OR UNIT DESIGNATION	SYSTEM	QUANTITY	UNITS	LOCATION OR AREA SERVED	CAPACITY INDOOR COOLING (HP)	ELECTRICAL CHARACTERISTICS POWER CONSUMPTION (KW)	VOLTS	PHASE	CYCLE	UNIT DESCRIPTION	REMARKS
AU 23	INDOOR UNIT	180	UNITS	STUDIO & HDCP UNITS, GRND–4TH FLR BLDG–A GF- SU02 TO 08 - SOUTH GF-SU - 02 TO 15 - NORTH GF - SU03, 39 TO 46, 33 TO 36 GF - SU4, 37 & 38 2F - SU01 2F-SU02 TO 09 - SOUTH 2F-SU10 2F-SU11 TO 17, & SU02 - NORTH 2F-SU18 2F- SU35 2F- SU43, 44, & 04, 2F-SU20 TO SU33 3F - SU01 3F-SU02 TO 08 3F- SU09 3F - SU10 TO 16 3F - SU17 3F- SU20 TO SU31 3F- SU33 3F- SU41, 42, & 04, 4F- SU02 TO 07 4F- SU08 4F- SU09 4F- SU10 TO 17 4F - SU18 4F- SU20 TO SU30 4F- SU32 4F - SU40, 41, & 51	1.5	1.21	220	1	60	R410A WINDOW–TYPE AIRCON UNIT	APPROVED EQUAL
AU 03	INDOOR UNIT	1	UNIT	CONFERENCE ROOM, GROUND FLOOR BLDG–A	1.5	1.21	220	1	60		
AU 01	INDOOR UNIT	1	UNIT	OFFICE, GROUND FLOOR BLDG–A	1.5	1.21	220	1	60		
AU 02	INDOOR UNIT	71	UNITS	STUDIO & HDCP UNITS, GRND–5TH FLR BLDG–A GF-SU01 - NORTH GF-SU09 - SOUTH GF-SU16 GF - SU17 GF - SU18 TO 29, & SU03 GF-SU30 2F-SU19 2F - SU01 3F- SU19 3F - SU01 4F- SU1 4F- SU20 5F - SU01 5F - SU02 TO 06 5F - SU07 5F - SU08 5F - SU09 TO 16 5F - SU17 5F - SU19 TO 28 5F - SU30 5F - SU38, 39, & 49 5F - SU40 TO 48, & SU31 TO 37	2.0	1.70	220	1	60		
AU 05	INDOOR UNIT	6	UNITS	STUDIO & HDCP UNITS, GRND–5TH FLR BLDG–A GF - SU04 2F - SU34 3F - SU32 4F- SU31 5F - SU18 5F - SU29	2.5	2.1	220	1	60		

BUILDING B - R410A WINDOW TYPE AIRCONDITIONING UNITS

EQUIPMENT TAG OR UNIT DESIGNATION	SYSTEM	QUANTITY	UNITS	LOCATION OR AREA SERVED	CAPACITY INDOOR COOLING (HP)	ELECTRICAL CHARACTERISTICS POWER CONSUMPTION (KW)	VOLTS	PHASE	CYCLE	UNIT DESCRIPTION	REMARKS
AU 22	INDOOR UNIT	179	UNITS	STUDIO & HDCP UNITS, GRND–4TH FLR BLDG–B GF-SU01 - EAST GF - SU24, 02 TO 29 GF - SU30 GFSU - 37, 32 TO 36 GFSU - 44, 40 TO 46 2F- SU01 2F - SU02 TO 08, & 2F - SU11 TO 17 2F-SU36 2F-SU37 2F- SU38 2F-SU46 2F - SU47 2F- SU48-55 3F- SU01 3F - SU02 TO 06, & 3F - SU09 TO 15 3F- SU04 3F- SU05 3F- SU36 TO 43 3F- SU44 3F - SU45 3F- SU46-52 4F - SU02 TO 04, & 4F - SU07 TO 14 4F- SU15 4F- SU04 4F- SU05 4F- SU36 TO 43 4F- SU44 4F- SU46 TO 51 4F- SU45	1.5	1.21	220	1	60	R410A WINDOW–TYPE AIRCON UNIT	APPROVED EQUAL
AU 03	INDOOR UNIT	1	UNIT	CONFERENCE ROOM, GROUND FLR BLDG–B	1.5	1.21	220	1	60		
AU 01	INDOOR UNIT	1	UNIT	OFFICE, GROUND FLOOR BLDG–B	1.5	1.21	220	1	60		
AU 02	INDOOR UNIT	74	UNITS	STUDIO & HDCP UNITS, GRND–5TH FLR BLDG–B GF-SU06, 02 TO 10, & GF13 TO 16 GF - SU11 & 12 GF - SU17 GF- SU01 GF- SU39 2F-SU09 & 10 2F- SU18 2F - SU56 3F- SU07 & 08 3F- SU16 3F - SU53 4F- SU05 & 06 4F- SU14 4F- SU52 5F - SU13 5F - SU14 TO 31 5F - SU32 5F - SU34 TO 41 5F - SU42 5F - SU44 TO 48 5F - SU43 5F - SU33 5F - SU05 TO 11, & SU02	2.0	1.70	220	1	60		
AU 04	INDOOR UNIT	10	UNITS	STUDIO & HDCP UNITS, GRND–5TH FLR BLDG–B GF-SU01 - WEST GF-SU49 2F- SU01 3F- SU01 4F- SU01 5F - SU01 5F - SU03 & 04 5F - SU49 5F - SU12	2.5	2.1	220	1	60		

BUILDING C - R410A WINDOW TYPE AIRCONDITIONING UNIT

EQUIPMENT TAG OR UNIT DESIGNATION	SYSTEM	QUANTITY	UNITS	LOCATION OR AREA SERVED	CAPACITY INDOOR COOLING (HP)	ELECTRICAL CHARACTERISTICS POWER CONSUMPTION (KW)	VOLTS	PHASE	CYCLE	UNIT DESCRIPTION	REMARKS
AU 09	INDOOR UNIT	1	UNIT	GARBAGE COLD STO., GRND FLOOR BLDG–C	2	1.70	220	1	60	R410A WINDOW–TYPE AIRCON UNIT	APPROVED EQUAL

BUILDING C - CEILING FANS

EQUIPMENT TAG OR UNIT DESIGNATION	SYSTEM	QUANTITY	UNITS	LOCATION OR AREA SERVED	CAPACITY SIZE (IN.)	CAPACITY AIR FLOW (CMM)	ELECTRICAL CHARACTERISTICS POWER CONSUMPTION (W)	VOLTS	PHASE	CYCLE	UNIT DESCRIPTION
CF 03	CEILING FAN	18	UNIT	ATHLETE'S DINING AREA, GROUND FLR BLDG–C	36	–	50	220	1	60	CEILING FAN ORBIT–TYPE
CF 02	CEILING FAN	2	UNIT	STORAGE AREA, SECOND FLOOR BLDG–C	36	–	50	220	1	60	CEILING FAN ORBIT–TYPE
CF 01	CEILING FAN	1	UNIT	LOUNGE	36	–	50	220	1	60	CEILING FAN ORBIT–TYPE

BUILDING A&B - R410A SPLIT TYPE AIRCONDITIONING UNITS (ELECTRONICS ROOM BACK-UP UNIT)

EQUIPMENT TAG OR UNIT DESIGNATION	SYSTEM	QUANTITY	UNITS	LOCATION OR AREA SERVED	CAPACITY INDOOR/OUTDOOR COOLING (BTU/HR) (KJ/HR)	HARD DRAWN, REF. PIPE SIZE, TYPE L LIQUID (MM)	HARD DRAWN, REF. PIPE SIZE, TYPE L GAS (MM)	ELECTRICAL CHARACTERISTICS POWER CONSUMPTION (KW)	VOLTS	PHASE	CYCLE	UNIT DESCRIPTION
ACCU 01 / FCU 01	ACCU/FCU	2	SETS	ELECTRONICS ROOM (BACK–UP UNITS)–BLD'G. A&B	17,999 (18,990)	6.4ø	12.7ø	1.54	220	1	60	SPLIT TYPE DX INVERTER UNIT

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA Bases Conversion and Development Authority AND MTD Clark, Inc. VIVENCIO B. DIZON PRESIDENT PATRICK NICHOLAS P. DAVID PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com Tel. nos. 373-9345 ZOILO S. DELA CRUZ VICE PRESIDENT–OPERATION REG No.: 0022657 PTR No: 8118498 TIN No.: 116–426–274 PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 6th Floor Aurora Milestone Bldg. 1045 Aurora Blvd. Quezon City, Philippines 1111 Tel. (632) 421-2671 to 74 Fax. (632) 421-2451 Email : fildravo@yahoo.com Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS 9th Flr. Feliza Bldg., 106 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 18 VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SCHEDULE OF AIR CONDITIONING & VENTILATION EQUIPMENTS	M-003

EQUIPMENT SCHEDULE: VENTILATING FANS

BUILDING A - FRESH & EXHAUST AIR VENTILATING FANS

EQUIPMENT TAG OR UNIT DESIGNATION	QUANTITY	UNIT	LOCATION OR AREA SERVED	CAPACITY	EXTERNAL STATIC PRESSURE	ELECTRICAL CHARACTERISTICS			POWER	UNIT DESCRIPTION (MANUFACTURER TYPE/DESCRIPTION)(SIZE/MODEL)	REMARKS
				CFM (CMH)	IWG	VOLTS	PHASE	CYCLE	HP		
FAF-B-A1	1	UNIT	BASEMENT PUMP RM - BLDG - A	4500 (7650)	0.5	400	3	60	1.5	FRESH AIR FAN ,INLINE BELT DRIVEN CABINET TYPE (CENTRIFUGAL)/(NIAGARA/NYB DOUBLE WIDTH FAN W/CAB.) (16")	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
EAF-2F-A1	1	UNIT	LOCATION: 2F AND AREA SERVED BASEMENT PUMP RM - BLDG - A	4500 (7650)	0.5	400	3	60	1.5	EXHAUST AIR FAN ,SISW BACKWARD CURVE (CENTRIFUGAL) / (NIAGARA/NYB GPA FAN) (BI-SISW) (22")	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
PEF-2F-A1; PEF-3F-A1; PEF-4F-A1; PEF-5F-A1	4	UNITS	2ND-5TH FLOOR PANTRY BLDG-A	110 (187)	40 PASCALS	220	1	60	48W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 160)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WEF-01	2	UNIT	GF, GENSET RM, BLDG-A	–	–	220	1	60	–	WALL MOUNTED EXHAUST FAN (EXPLOSION PROOF)	EXHAUST AIR UNIT
WEF-01	2	UNITS	GF, TRANSFORMER RM, BLDG-A	–	–	220	1	60	–	WALL MOUNTED EXHAUST FAN (EXPLOSION PROOF)	EXHAUST AIR UNIT
WSAF-GF-A1	1	UNIT	GF CLINIC (PATIENT, NURSE AND DOCTOR RM), BLDG - A	50 (85)	0.04	220	1	60	25W	WALL MOUNTED SUPPLY AIR FAN WITH ELEC. 1 PHASE SPEED CONTROLLER. / (NIAGARA WALL MOUNTED EXHAUST FAN) (NIA-WMEF-6)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WSAF-GF-A2	1	UNIT	GF OFFICE RM, BLDG - A	30 (51)	0.04	220	1	60	25W	WALL MOUNTED SUPPLY AIR FAN WITH ELEC. 1 PHASE SPEED CONTROLLER. / (NIAGARA WALL MOUNTED EXHAUST FAN) (NIA-WMEF-6)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WSAF-GF-A3	1	UNIT	GF CONFERENCE RM, BLDG - A	60 (102)	0.04	220	1	60	25W	WALL MOUNTED SUPPLY AIR FAN WITH ELEC. 1 PHASE SPEED CONTROLLER. / (NIAGARA WALL MOUNTED EXHAUST FAN) (NIA-WMEF-6)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
HKEF-GF-A1; HKEF-GF-A2; HKEF-2F-A1; HKEF-2F-A2; HKEF-3F-A1; HKEF-3F-A2; HKEF-4F-A1; HKEF-4F-A2; HKEF-5F-A1; HKEF-5F-A2; HKEF-RD-A	11	UNITS	GF - RD HOUSE KEEPING ROOM - BLDG. A	20 (34)	20 PASCALS	220	1	60	24W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 120)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WEF-RD-A	1	UNIT	ROOF DECK EE RM, BLDG - A	20 (34)	0.04	220	1	60	25W	WALL MOUNTED EXHAUST FAN / (NIAGARA WALL MOUNTED EXHAUST FAN) (NIA-WMEF-6)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING

BUILDING B - FRESH & EXHAUST AIR VENTILATING FANS

EQUIPMENT TAG OR UNIT DESIGNATION	QUANTITY	UNIT	LOCATION/AREA SERVED	CAPACITY	EXTERNAL STATIC PRESSURE	ELECTRICAL CHARACTERISTICS			POWER	UNIT DESCRIPTION (MANUFACTURER TYPE/DESCRIPTION)(SIZE/MODEL)	REMARKS
				CFM (CMH)	IWG	VOLTS	PHASE	CYCLE	HP		
PEF-2F-B1; PEF-3F-B1; PEF-4F-B1; PEF-5F-B1	4	UNITS	2ND–5TH FLR PANTRY BLDG–B	110 (187)	40 PASCALS	220	1	60	48W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 160)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WEF-01	2	UNITS	GF, GENSET RM, BLDG–B	–	–	220	1	60	–	WALL MOUNTED EXHAUST FAN (EXPLOSION PROOF)	EXHAUST AIR UNIT
WEF-01	2	UNITS	GF, TRANSFORMER RM, BLDG–B	–	–	220	1	60	–	WALL MOUNTED EXHAUST FAN (EXPLOSION PROOF)	EXHAUST AIR UNIT
WSAF-GF-B2	1	UNIT	GF OFFICE RM, BLDG – B	30 (51)	0.04	220	1	60	25W	WALL MOUNTED SUPPLY AIR FAN WITH ELEC. 1 PHASE SPEED CONTROLLER. / (NIAGARA WALL MOUNTED EXHAUST FAN) (NIA–WMEF–6)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WSAF-GF-B1	1	UNIT	GF CONFERENCE RM, BLDG – B	60 (102)	0.04	220	1	60	25W	WALL MOUNTED SUPPLY AIR FAN WITH ELEC. 1 PHASE SPEED CONTROLLER. / (NIAGARA WALL MOUNTED EXHAUST FAN) (NIA–WMEF–6)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
HKEF-GF-B1; HKEF-GF-B2; HKEF-2F-B1; HKEF-2F-B2; HKEF-3F-B1; HKEF-3F-B2; HKEF-4F-B1; HKEF-4F-B2; HKEF-5F-B1; HKEF-5F-B2; HKEF-RD-B	11	UNITS	GF - RD HOUSE KEEPING ROOM - BLDG. B	20 (34)	20 PASCALS	220	1	60	24W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 120)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WEF-RD-B	1	UNIT	ROOF DECK EE RM, BLDG - B	20 (34)	0.04	220	1	60	25W	WALL MOUNTED EXHAUST FAN / (NIAGARA WALL MOUNTED EXHAUST FAN) (NIA–WMEF–6)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING

BUILDING C - FRESH & EXHAUST AIR VENTILATING FANS

EQUIPMENT TAG OR UNIT DESIGNATION	QUANTITY	UNIT	LOCATION/AREA SERVED	CAPACITY	EXTERNAL STATIC PRESSURE	ELECTRICAL CHARACTERISTICS			POWER	UNIT DESCRIPTION (MANUFACTURER TYPE/DESCRIPTION)(SIZE/MODEL)	REMARKS
				CFM (CMH)	IWG	VOLTS	PHASE	CYCLE	HP		
FAB-02	1	UNIT	DECK GARDEN BLDG–C	12000 (20400)	2.0	400	3	60	10	NIAGARA / NYB GENERAL PURPOSE FAN (BI–SISW) (33")	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
KEB-02	1	UNIT	DECK GARDEN BLDG–C	15000 (25500)	1.5	400	3	60	10	NIAGARA / NYB GENERAL PURPOSE FAN (BI–SISW) (36")	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
TEF-GF-C1	1	UNIT	GF MALE TOILET BLDG–C	150 (255)	40 PASCALS	220	1	60	48W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 160)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
TEF-GF-C2	1	UNIT	GF FEMALE TOILET BLDG–C	100 (170)	25 PASCALS	220	1	60	26W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 150)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
TEF-GF-C3	1	UNIT	GF HDCP TOILET BLDG–C	50 (85)	25 PASCALS	220	1	60	24W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 120)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
TEF-2F-C1	1	UNIT	2F MALE TOILET BLDG–C	150 (255)	40 PASCALS	220	1	60	48W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 160)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
TEF-2F-C2	1	UNIT	2F FEMALE TOILET BLDG–C	100 (170)	25 PASCALS	220	1	60	26W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 150)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
TEF-2F-C3	1	UNIT	2F HDCP TOILET BLDG–C	50 (85)	25 PASCALS	220	1	60	24W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 120)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WEF-GF-C1	1	UNIT	GF DELIVERY & SORTING AND STORAGE "B" AREA, BLDG – C	160 (272)	10 PASCALS	220	1	60	25W	WALL MOUNTED EXHAUST FAN / (NIAGARA WALL MOUNTED EXHAUST FAN) (NIA–WMEF–6)	EXPLOSION PROOF – AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WEF-GF-C2	1	UNIT	GF STORAGE "A" AREA, BLDG – C	50 (85)	10 PASCALS	220	1	60	25W	WALL MOUNTED EXHAUST FAN / (NIAGARA WALL MOUNTED EXHAUST FAN) (NIA–WMEF–6)	EXPLOSION PROOF – AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
EF-GF-C1	1	UNIT	GF GARBAGE & WASHIG AREA, AND COLD GARGAGE, BLDG – C	200 (340)	30 PASCALS	220	1	60	65W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 180)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WSAF-GF-C1; WSAF-GF-C2; WSAF-GF-C3	3	UNITS	GF DINING AREA, BLDG – C	60 (102)	10 PASCALS	220	1	60	25W	WALL MOUNTED SUPPLY AIR FAN / (NIAGARA WALL MOUNTED EXHAUST FAN) (NIA–WMEF–6)	EXPLOSION PROOF – AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WEF-2F-C1	1	UNIT	2ND FLR, STORAGE RM, BLDG–C	260 (442)	10 PASCALS	220	1	60	26W	WALL MOUNTED EXHAUST FAN / (KDK WALL MTD. EXHAUST FAN W/ SHUTTER) (20ALH)	EXPLOSION PROOF – AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WSAF-2F-C1	1	UNIT	2ND FLR, STORAGE RM, BLDG–C	260 (442)	10 PASCALS	220	1	60	26W	WALL MOUNTED SUPPLY FRESH AIR FAN / (KDK WALL MTD. SUPPLY FAN W/ SHUTTER) (20ALH)	EXPLOSION PROOF – AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WEF-2F-C2; WEF-2F-C3	2	UNITS	2ND FLR, WASHING AND DRYER AREA, BLDG–C	1600 (2720)	20 PASCALS	220	1	60	155W	WALL MOUNTED EXHAUST FAN / (NIAGARA EXHAUST FAN W/ SHUTTER & REAR GUARD) (NBX 40)	EXPLOSION PROOF – AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WSAF-2F-C2; WSAF-2F-C3	2	UNITS	2ND FLR, WASHING AND DRYER AREA, BLDG–C	1600 (2720)	20 PASCALS	220	1	60	155W	WALL MOUNTED SUPPLY FRESH AIR FAN / (NIAGARA SUPPLY FAN W/ FRONT REAR GUARD) (NBX 40)	EXPLOSION PROOF – AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WEF-2F-C1	1	UNIT	2ND FLR, LAUNDRY AREA, BLDG–C	1450 (2465)	20 PASCALS	220	1	60	170W	WALL MOUNTED EXHAUST FAN / (NIAGARA EXHAUST FAN W/ SHUTTER & REAR GUARD) (NBX 35)	EXPLOSION PROOF – AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WSAF-2F-C1	1	UNIT	2ND FLR, LAUNDRY AREA, BLDG–C	1450 (2465)	20 PASCALS	220	1	60	170W	WALL MOUNTED SUPPLY FRESH AIR FAN / (NIAGARA SUPPLY FAN W/ FRONT & REAR GUARD) (NBX35)	EXPLOSION PROOF – AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
OF-GF-C1; OF-GF-C2; OF-GF-C3; OF-GF-C4; OF-GF-C5	5	UNITS	GF DELIVERY & SORTING AREA,COLD STORAGE, GARBAGE AREA, WET STORAGE, GARBAGE COLD STORAGE	–	–	220	1	60	–	4 SPEED, 360 DEG. CEILING MOUNT ORBIT FAN METAL BLADE (16") WALL MOUNT WIRED SPEED CONTROLLER	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
OF-2F-C1; OF-2F-C2; OF-2F-C3	3	UNITS	2F WASHING, DRYING, AND LAUNDRY AREA	–	–	220	1	60	–	4 SPEED, 360 DEG. CEILING MOUNT ORBIT FAN METAL BLADE (16") WALL MOUNT WIRED SPEED CONTROLLER	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
EF-GF-C2; EF-2F-C1	2	UNITS	GF & 2F EE RM, BLDG–C	20 (34)	20 PASCALS	220	1	60	24W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 120)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
WEF-GF-C3	1	UNIT	GRND FLR, PUMP RM, BLDG–C	260 (442)	10 PASCALS	220	1	60	26W	WALL MOUNTED EXHAUST FAN / (KDK WALL MTD. EXHAUST FAN W/ SHUTTER) (20ALH)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING
HKEF-2F-C1	1	UNIT	2F HK RM, BLDG–C	20 (34)	20 PASCALS	220	1	60	24W	CEILING CASSETTE EXHAUST FAN / (NIAGARA CEILING CASSETTE FAN) (NIA 120)	AS PER MANUFACTURER APPROXIMATE/EQUAL POWER RATING

NOTE: EFFICIENT PERFORMANCE VERIFIED BY MANUFACTURER

BUILDING A & B - SMOKE EVACUATION VENTILATING FANS

EQUIPMENT TAG OR UNIT DESIGNATION	UNIT DESIGN AND DESCRIPTIONS							MANUFACTURER SELECTION					
	SYSTEM NO.	QTY	UNIT	LOCATION OR AREA SERVED	MANUFACTURER NAME & TYPE (NIAGARA FAN DESCRIPTION)	AIR FLOWRATE CFM (CMH)	EXTERNAL STATIC PRESSURE Pa (IWG)	FAN MOTOR (HP)	ELECTRICAL CHARACTERISTIC			SIZE/ MODEL	REMARKS
									VOLT	PHASE	HERTZ		
PAF-RD-02; PAF-RD-03; PAF-RD-06; PAF-RD-07	SINGLE UNIT	4	UNITS	ROOF DECK BLDG A & B	NIAGARA / NYB GPA FAN (BI SISW) (PRESSURIZATION AIR FAN)	10400 (17680)	375 (1.5)	5	440	3	60	30"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
SED-RD-01; SED-RD-02; SED-RD-03; SED-RD-04; SED-RD-05; SED-RD-06; SED-RD-07; SED-RD-08	SINGLE UNIT	8	UNITS	ROOF DECK BLDG A & B HALLWAY	NIAGARA / NYB GPA FAN (BI SISW) (SMOKE EXTRACTION FAN)	1100 (1870)	375 (1.5)	1.5	440	3	60	15"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
PAF-RD-01	SINGLE UNIT	1	UNIT	ROOF DECK BLDG A - FIRE EXIT 01	NIAGARA / NYB GENERAL PORPUSE FAN (PRESSURIZATION AIR FAN) (CENTRIFUGAL)	15810 (26877)	375 (1.5)	7.5	440	3	60	36"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
PAF-RD-08	SINGLE UNIT	1	UNIT	ROOF DECK BLDG A - FIRE EXIT 08	NIAGARA / NYB GENERAL PORPUSE FAN (PRESSURIZATION AIR FAN) (CENTRIFUGAL)	15268 (25956)	375 (1.5)	7.5	440	3	60	33"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
PAF-F.L-A; PAF-F.L-B	SINGLE UNIT	2	UNITS	ROOF DECK BLDG A & B - FIREMAN LIFT'S	NIAGARA / NYB GPA FAN (BI SISW) (PRESSURIZATION AIR FAN) (CENTRIFUGAL)	9745 (15567)	150 (0.75)	5	440	3	60	27"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
PAF-RD-04	SINGLE UNIT	1	UNIT	ROOF DECK BLDG B - FIRE EXIT 04	NIAGARA / NYB GENERAL PORPUSE FAN (PRESSURIZATION AIR FAN) (CENTRIFUGAL)	15316 (26037)	375 (1.5)	7.5	440	3	60	33"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
PAF-RD-05	SINGLE UNIT	1	UNIT	ROOF DECK BLDG A - FIRE EXIT 01	NIAGARA / NYB GENERAL PORPUSE FAN (PRESSURIZATION AIR FAN) (CENTRIFUGAL)	15555(26444)	375 (1.5)	7.5	440	3	60	36"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING

NOTE: FOR ORIENTATION OF SISW UNITS REFER TO PLAN LAYOUT, AND EFFICIENT PERFORMANCE VERIFIED BY MANUFACTURER

BUILDING A & B - GENERAL TOILET EXHAUST FANS

EQUIPMENT TAG OR UNIT DESIGNATION	UNIT DESIGN AND DESCRIPTIONS							MANUFACTURER SELECTION					
	SYSTEM NO.	QTY	UNIT	LOCATION OR AREA SERVED	MANUFACTURER NAME & TYPE (NIAGARA FAN DESCRIPTION)	AIR FLOWRATE CFM (CMH)	EXTERNAL STATIC PRESSURE Pa (IWG)	FAN MOTOR (HP)	ELECTRICAL CHARACTERISTIC			SIZE/ MODEL	REMARKS
									VOLT	PHASE	HERTZ		
VARIOUS TOILET EXHAUST FANS (SYSTEM 01 TO 03)													
TEF-GF-A1; TEF-GF-A2	System 01	2	UNITS	STUDIO UNIT @ GL-A.23-AC - BLD'G. A	NIAGARA CEILLING CASSETTE FAN	50 (85)	25 (0.1)	24W	230	1	60	NIA 120	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
TEF-GF-B1; TEF-GF-B2	System 01	2	UNITS	STUDIO UNIT @ GL-B23-BB - BLD'G. B	NIAGARA CEILLING CASSETTE FAN	50 (85)	25 (0.1)	24W	230	1	60	NIA 120	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
TEF-GF-A3; TEF-GF-A4; TEF-2F-A1; TEF-2F-A2	System 02	4	UNITS	STUDIO UNIT @ GL-A.21-AC - BLD'G. A	NIAGARA CEILLING CASSETTE FAN	50 (85)	50 (0.2)	24W	230	1	60	NIA 120	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
TEF-GF-B3; TEF-GF-B4; TEF-2F-B1; TEF-2F-B2	System 02	4	UNITS	STUDIO UNIT @ GL-B.21-BB - BLD'G. B	NIAGARA CEILLING CASSETTE FAN	50 (85)	50 (0.2)	24W	230	1	60	NIA 120	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
EAF-S3-4F-A1	System 03	1	UNIT	VARIOUS STUDIO UNIT (6UNITS) @ GL-A.19-AC - BLD'G. A	NIAGARA CENTRIFUGAL INLINE FAN	300 (510)	100 (0.40)	190W	230	1	60	GCIL 200	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
EAF-S3-4F-B1	System 03	1	UNIT	VARIOUS STUDIO UNIT (6UNITS) @ GL-B.19-BB - BLD'G. B	NIAGARA CENTRIFUGAL INLINE FAN	300 (510)	100 (0.40)	190W	230	1	60	GCIL 200	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
MAJOR TOILET VENTILATING FANS - CENTRALIZED SYSTEM:													
EAF-S4-RD-A1; EAF-S4-RD-B1	System 04	2	UNITS	VARIOUS STUDIO UNIT BLD'G A & B, REFER TO PLANS	NIAGARA / NYB GPA FAN (BI SISW)	4150 (7055)	375 (1.5)	2	400	3	60	20"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
EAF-S5-RD-B2	System 05	1	UNIT	VARIOUS STUDIO UNIT BLD'G B, REFER TO PLANS	NIAGARA / NYB GPA FAN (BI SISW)	4200 (7140)	375 (1.5)	2	400	3	60	20"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
EAF-S6-RD-B3	System 06	1	UNIT	VARIOUS STUDIO UNIT BLD'G B - REFER TO PLANS	NIAGARA / NYB GPA FAN (BI SISW)	3950 (6715)	375 (1.5)	2	400	3	60	20"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
EAF-S5-RD-A2	System 05	1	UNIT	VARIOUS STUDIO UNIT BLD'G A - REFER TO PLANS	NIAGARA / NYB GPA FAN (BI SISW)	4050 (6885)	375 (1.5)	2	400	3	60	20"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
EAF-S6-RD-A3	System 06	1	UNIT	VARIOUS STUDIO UNIT BLD'G A- REFER TO PLANS	NIAGARA / NYB GPA FAN (BI SISW)	3900 (6630)	375 (1.5)	2	400	3	60	20"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
VARIOUS TOILET EXHAUST FANS (SYSTEM 07, 09, AND SINGLE UNIT)													
EAF-S7-4F-A5; EAF-S7-4F-B5	System 07	2	UNITS	VARIOUS STUDIO UNIT BLD'G A & B, REFER TO PLANS	NIAGARA CENTRIFUGAL INLINE FAN	300 (595)	90 (0.36)	190W	230	1	60	GCIL 200	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
TEF-GF-A5; TEF-GF-A6; TEF-2F-A3	System 08	3	UNITS	STUDIO UNIT @ GL-A.2-AN - BLD'G. A	NIAGARA CEILLING CASSETTE FAN	50 (85)	50 (0.2)	24W	230	1	60	NIA 120	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
TEF-GF-B5; TEF-GF-B6; TEF-2F-B3	System 08	3	UNITS	STUDIO UNIT @ GL-B.2-BN - BLD'G. B	NIAGARA CEILLING CASSETTE FAN	50 (85)	50 (0.2)	24W	230	1	60	NIA 120	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
TEF-GF-A7; TEF-GF-B7	SINGLE UNIT	2	UNITS	EXERCISE RM - SHE TOILET - BLD'G. A&B	NIAGARA CEILLING CASSETTE FAN	150 (255)	30 (0.12)	48W	230	1	60	NIA 160	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
TEF-GF-A8; TEF-GF-B8	SINGLE UNIT	2	UNITS	EXERCISE RM - HE TOILET - BLD'G. A&B	NIAGARA CEILLING CASSETTE FAN	200 (340)	30 (0.12)	65W	230	1	60	NIA 180	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
TEF-5F-A1; TEF-5F-B1	SINGLE UNIT	2	UNITS	5F COMMON TOILET - BLD'G. A&B	NIAGARA CEILLING CASSETTE FAN	50 (85)	25 (0.10)	24W	230	1	60	NIA 120	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING

NOTE: EFFICIENT PERFORMANCE VERIFIED BY MANUFACTURER

BUILDING A & B - FRESH AIR FANS

EQUIPMENT TAG OR UNIT DESIGNATION	UNIT DESIGN AND DESCRIPTIONS							MANUFACTURER SELECTION					
	SYSTEM NO.	QTY	UNIT	LOCATION OR AREA SERVED	MANUFACTURER NAME & TYPE (NIAGARA FAN DESCRIPTION)	AIR FLOWRATE CFM (CMH)	EXTERNAL STATIC PRESSURE Pa (IWG)	FAN MOTOR (HP)	ELECTRICAL CHARACTERISTIC			SIZE/ MODEL	REMARKS
									VOLT	PHASE	HERTZ		
FRESH AIR FANS (GROUND FLOOR TO 5TH FLOOR) - BUILDING. A													
FAF-GF-A1	System 10	1	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT - BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1200 (2040)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-GF-A2	System 10	1	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT - BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	922 (1568)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-GF-A3	System 10	1	UNIT	HALLWAY 02 FOR VARIOUS STUDIO UNIT- BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1140 (1938)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-2F-A1; FAF-2F-A2	System 11	2	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT- BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1140 (1938)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-2F-A3	System 11	1	UNIT	HALLWAY 02 FOR VARIOUS STUDIO UNIT - BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1260 (2142)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-3F-A1; FAF-3F-A2	System 12	2	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT - BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1050 (1785)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-3F-A3	System 12	1	UNIT	HALLWAY 02 FOR VARIOUS STUDIO UNIT - BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1200 (2040)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-4F-A1; FAF-4F-A2	System 13	2	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT - BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	990 (1683)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-4F-A3	System 13	1	UNIT	HALLWAY 02 FOR VARIOUS STUDIO UNIT - BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1140 (1938)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-5F-A1; FAF-5F-A2	System 14	2	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT - BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	960 (1632)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-5F-A3	System 14	1	UNIT	HALLWAY 02 FOR VARIOUS STUDIO UNIT - BLD'G. A	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1080 (1836)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FRESH AIR FANS (GROUND FLOOR TO 5TH FLOOR) - BUILDING. B													
FAF-GF-B1	System 10	1	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT - BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1200 (2040)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-GF-B2	System 10	1	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT - BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	922 (1568)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-GF-B3	System 10	1	UNIT	HALLWAY 02 FOR VARIOUS STUDIO UNIT- BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1140 (1938)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-2F-B1; FAF-2F-B2	System 11	2	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT- BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1140 (1938)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-2F-B3	System 11	1	UNIT	HALLWAY 02 FOR VARIOUS STUDIO UNIT - BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1260 (2142)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-3F-B1; FAF-3F-B2	System 12	2	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT - BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1050 (1785)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-3F-B3	System 12	1	UNIT	HALLWAY 02 FOR VARIOUS STUDIO UNIT - BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1200 (2040)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-4F-B1; FAF-4F-B2	System 13	2	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT - BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	990 (1683)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-4F-B3	System 13	1	UNIT	HALLWAY 02 FOR VARIOUS STUDIO UNIT - BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1140 (1938)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-5F-B1; FAF-5F-B2	System 14	2	UNIT	HALLWAY 01 FOR VARIOUS STUDIO UNIT - BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	960 (1632)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING
FAF-5F-B3	System 14	1	UNIT	HALLWAY 02 FOR VARIOUS STUDIO UNIT - BLD'G. B	NIAGARA / NYB FC-DIDW FAN WITH CABINIET (DIRECT)	1080 (1836)	150 (0.6)	250W	230	1	60	9"	AS PER MANUFACTURER APPROXIMATE / EQUAL POWER RATING

NOTE: EFFICIENT PERFORMANCE VERIFIED BY MANUFACTURER

OWNER : NGAC PHASE I JV COMPANY

Republic of the Philippines
Office of the President
BCDA
Bases Conversion and Development Authority
AND
MTD
MTD Clark, Inc

VIVENCIO B. DIZON
PRESIDENT

PATRICK NICHOLAS P. DAVID
PRESIDENT

PREPARED BY:

FREY-FIL CORPORATION
MANILA - DAVAO - CEBU - ILOILO
83 West ave.Brgy.Paltok,SFDM Quezon City
www.freyfil.com Tel nos. 373-9345

ZOILO S. DELA CRUZ
VICE -PRESIDENT - OPERATION

REG No.: 0022657
PTR No: 8118498
TIN No.: 116-426-274
PLACE: MANILA
DATE: 01.20.2019

REVIEWED AND VALIDATED BY:

FILIPINAS DRAVO CORPORATION
Architectural & Engineering Consultants
5th Floor Aurora Milestone Bldg. 1045 Aurora Blvd. Quezon City Philippines 111 Tel. (632) 421-2571 to 74 Fax. (632) 421-2431
Email : fildravo@info.com.ph Website: www.fildravo.com

ALFREDO R. REVILLA
PROJECT MANAGER

SUBMITTED BY:

BANDAR HEBAT BUILDERS, INC.

ISAAC S. DAVID
PRESIDENT

CERTIFIED BY: INDEPENDENT CONSULTANT

TCGI ENGINEERS
9th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16

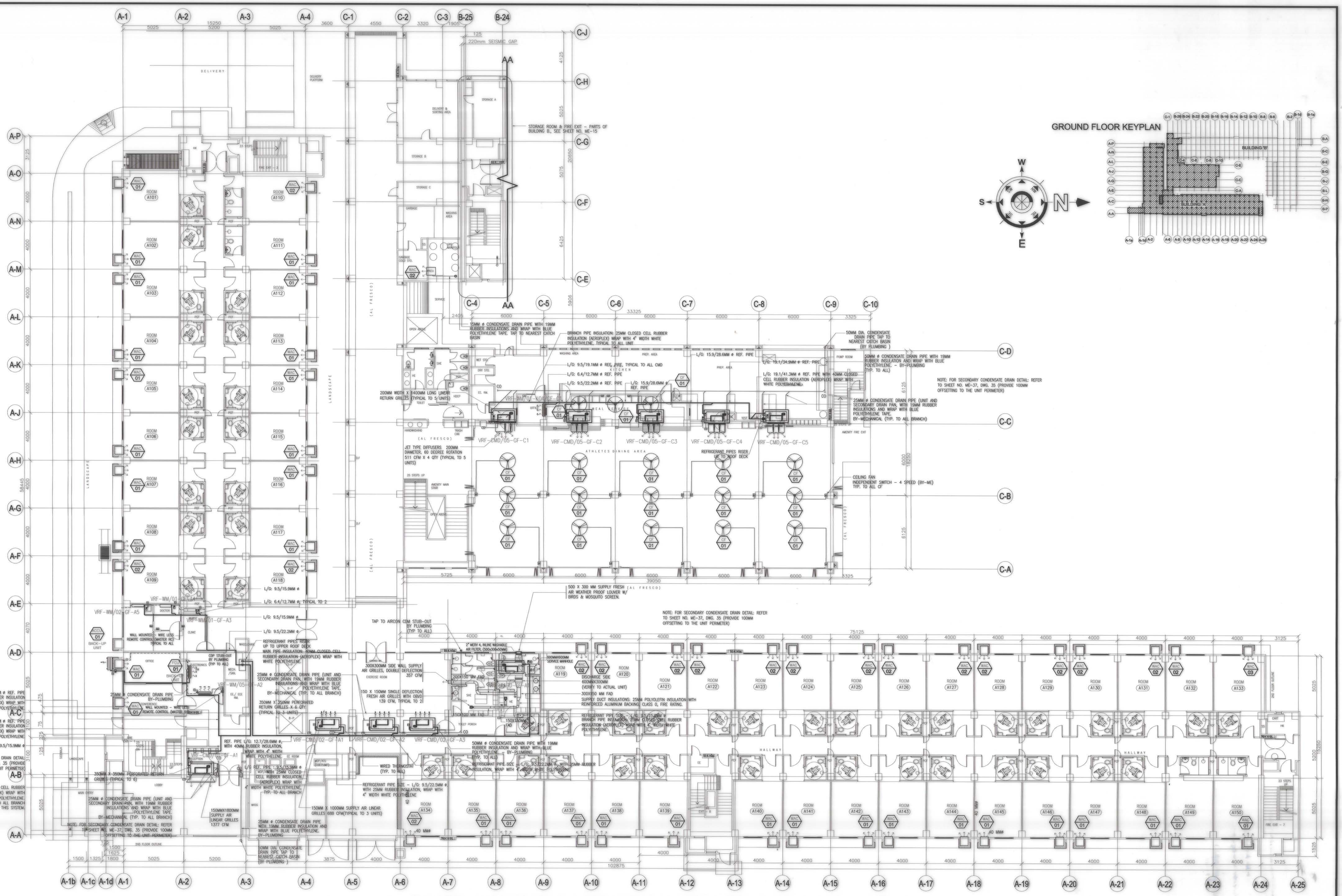
VIRGILIO A. MADRAZO
PRESIDENT/CEO

PROJECT TITLE:

AS-BUILT DRAWING
NGAC PHASE 1A
ATHLETES VILLAGE
(AIR CONDITIONING & VENTILATION SYSTEM)
New Clark City, Capas, Tarlac

SHEET CONTENTS:
SCHEDULE OF VENTILATING
EQUIPMENTS

SHEET NO.
M-004

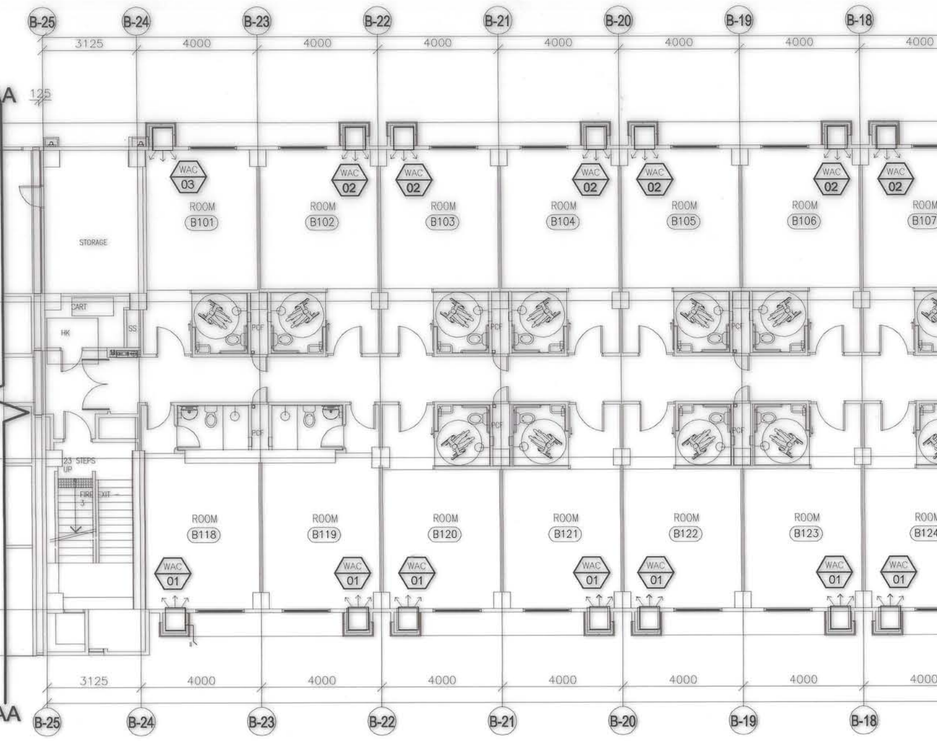


1 ME — BUILDING "A" & AMENITY BUILDING GROUND FLOOR AIRCONDITIONING LAYOUT PLAN

OWNER : NGAC PHASE I JV COMPANY BCDA — VIVENCIO B. DIZON, PRESIDENT AND MTD Clark Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	PREPARED BY: FREY-FIL CONSTRUCTION ZOILO S. DELA CRUZ, VICE PRESIDENT–OPERATION REG No.: 0022657 PTR No.: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: BUILDING "A" & AMENITY BUILDING GROUND FLOOR AIRCONDITIONING LAYOUT PLAN	SHEET NO. M-01

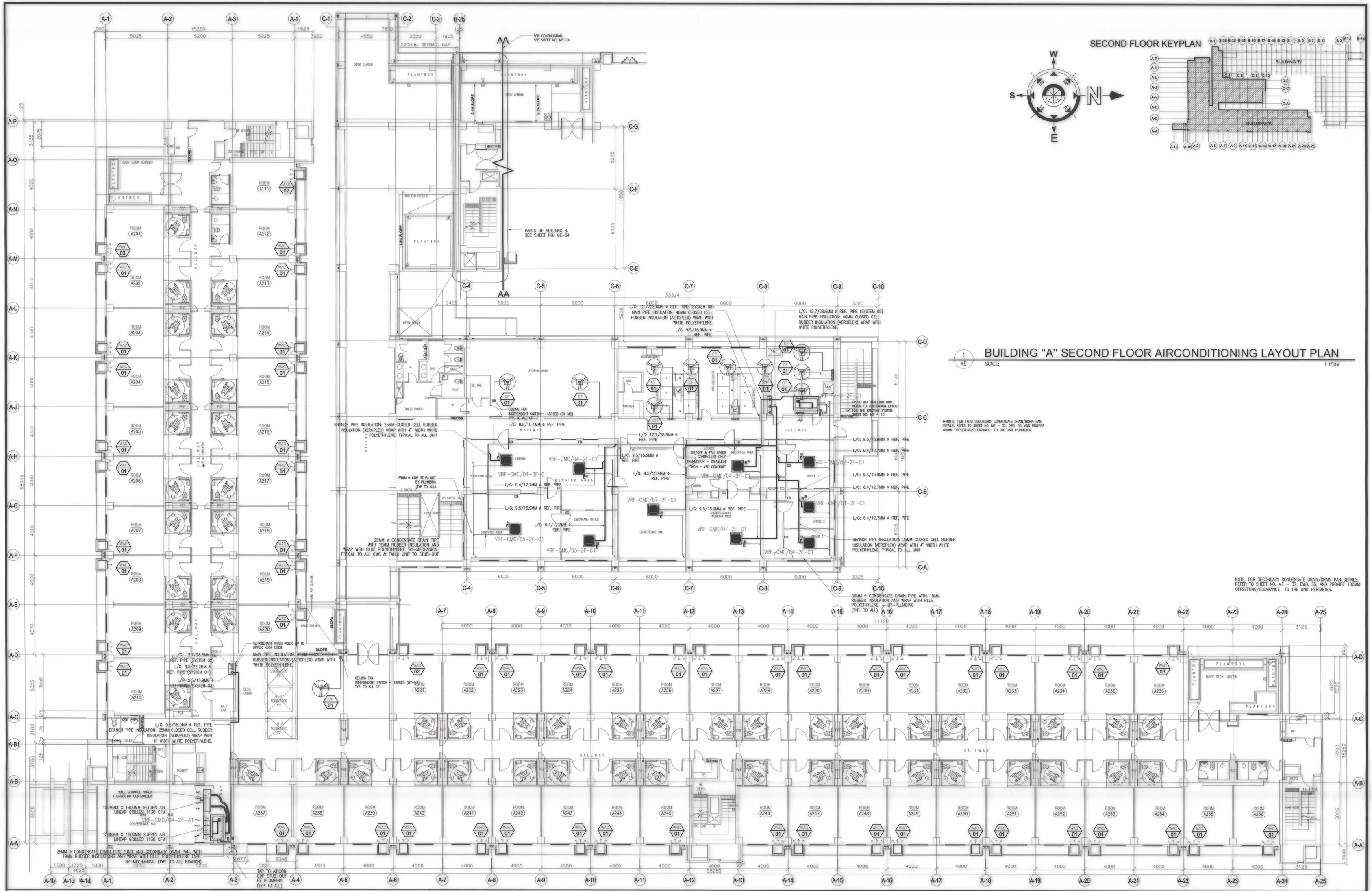
1 ME BUILDING "B" GROUND FLOOR AIRCONDITIONING LAYOUT PLAN

SCALE: 1:150M



GROUND FLOOR KEYPLAN

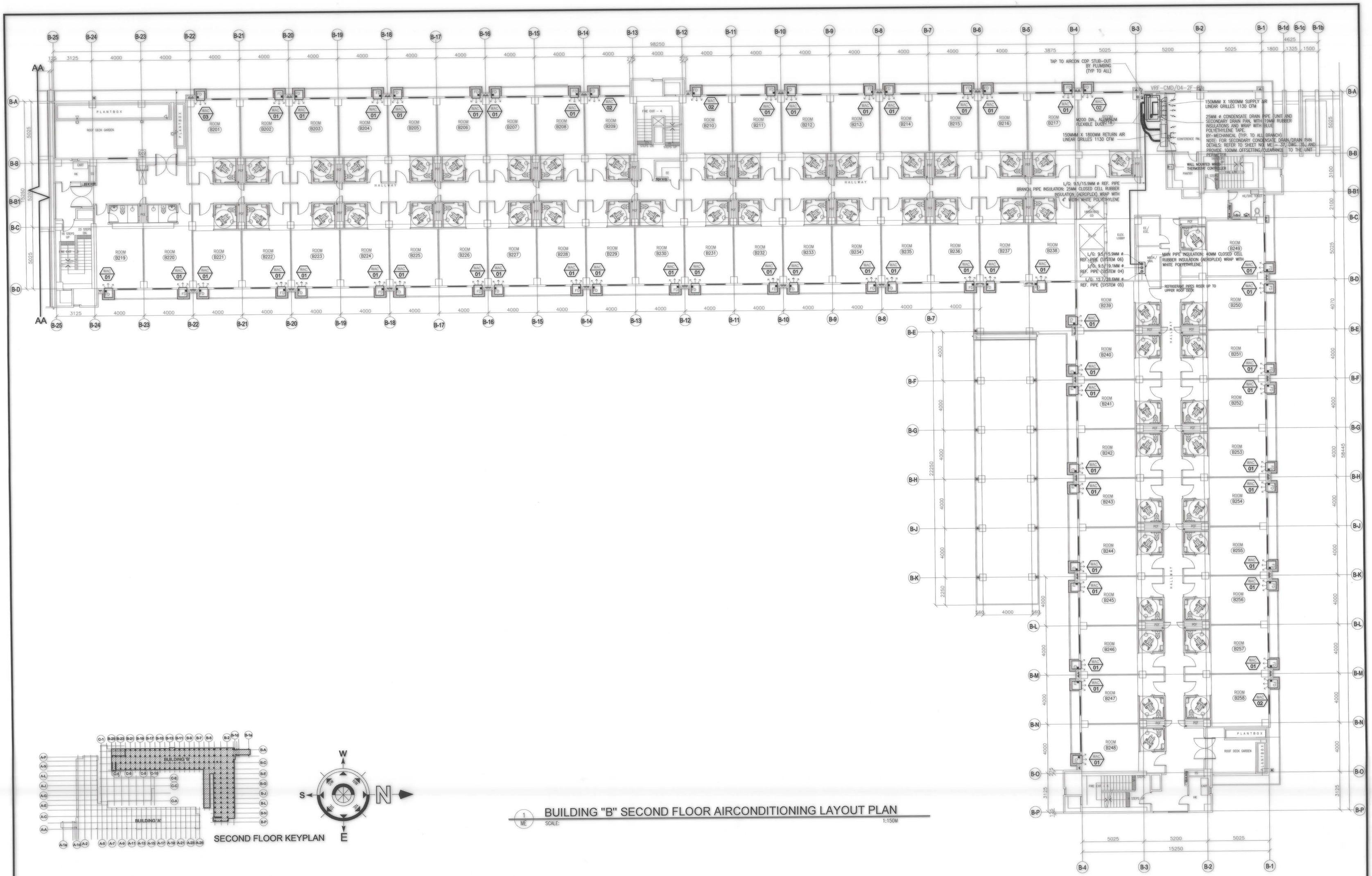
OWNER :	NGAC PHASE I JV COMPANY		
	BCDA Bases Conversion and Development Authority — VIVENCIO B. DIZON, PRESIDENT	AND	MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT
PREPARED BY:	FREY-FIL CORPORATION — MANILA - DAVAO - CEBU - ILOILO — 53 West ave.Brgy.Paltok,1705M Quezon City — www.freyfil.com — Tel nos. 373-9345	ZOILO S. DELA CRUZ, VICE PRESIDENT-OPERATION	REG No.: 0022657; TIN No.: 116-426-274; DATE: 01.20.2019; PTR No: 8118498; PLACE: MANILA
REVIEWED AND VALIDATED BY:	FILIPINAS DRAVO CORPORATION — Architectural & Engineering Consultants — 5th Floor Aurora Milestone Bldg. 1045 Aurora Blvd. Quezon City, Philippines 111 Tel: (632) 421-3071 to 74; Fax: (632) 421-2431 — Email : fildravo@info.com.ph — Website: www.fildravo.com	ALFREDO R. REVILLA, PROJECT MANAGER	
SUBMITTED BY:	BANDAR HEBAT BUILDERS, INC.	ISAAC S. DAVID, PRESIDENT	
CERTIFIED BY:	INDEPENDENT CONSULTANT — TCGI ENGINEERS — 9th Flr. Felza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16	VIRGILIO A. MADRAZO, PRESIDENT/CEO	
PROJECT TITLE:	AS-BUILT DRAWING — NGAC PHASE 1A — ATHLETES VILLAGE - BUILDING B — (AIR CONDITIONING & VENTILATION SYSTEM) — New Clark City, Capas, Tarlac		
SHEET CONTENTS:	BUILDING "B" GROUND FLOOR AIRCONDITIONING LAYOUT PLAN		
SHEET NO.	M-02		



1 ME **BUILDING "A" SECOND FLOOR AIRCONDITIONING LAYOUT PLAN**
SCALE: 1:150M

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:
Republic of the Philippines Office of the President BCDA Bases Conversion and Development Authority — VIVENCIO B. DIZON, PRESIDENT	ZOILO S. DELA CRUZ, VICE PRESIDENT-OPERATION	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants	BANDAR HEBAT BUILDERS, INC.
AND	FREY-FIL CORPORATION	ALFREDO B. REVILLA, PROJECT MANAGER	ISAAC S. DAVID, PRESIDENT
MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	REG No.: 0022657 · TIN No.: 116-426-274 · PTR No: 8118498 · PLACE: MANILA · DATE: 01.20.2019		

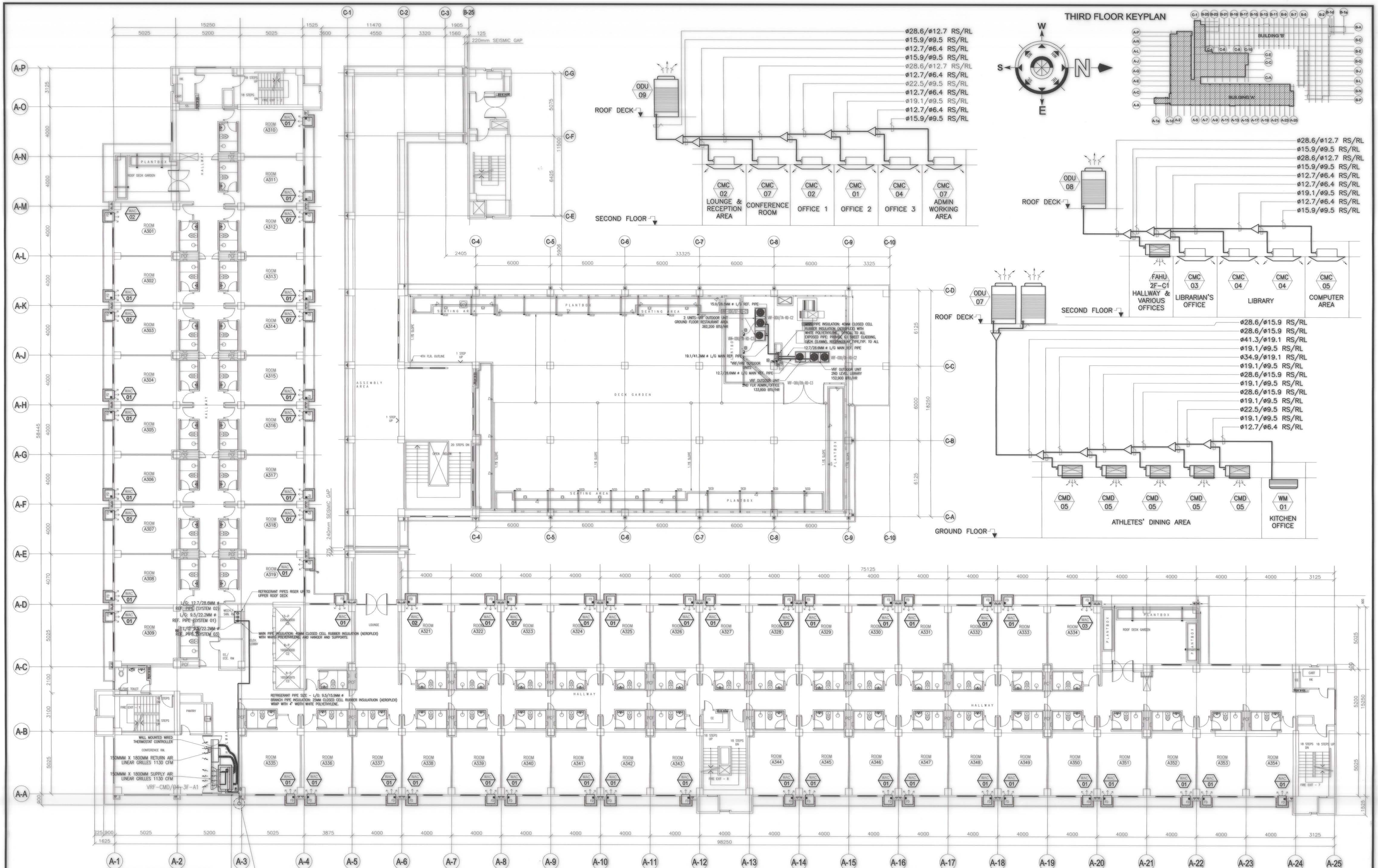
CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
TCGI ENGINEERS, 5th Flr. Feliza Bldg., 106 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "A" & AMENITY SECOND FLOOR AIRCONDITIONING LAYOUT PLAN	M-03
VIRGILIO A. MADRAZO, PRESIDENT/CEO			



1 ME — BUILDING "B" SECOND FLOOR AIRCONDITIONING LAYOUT PLAN

SCALE: 1:150M

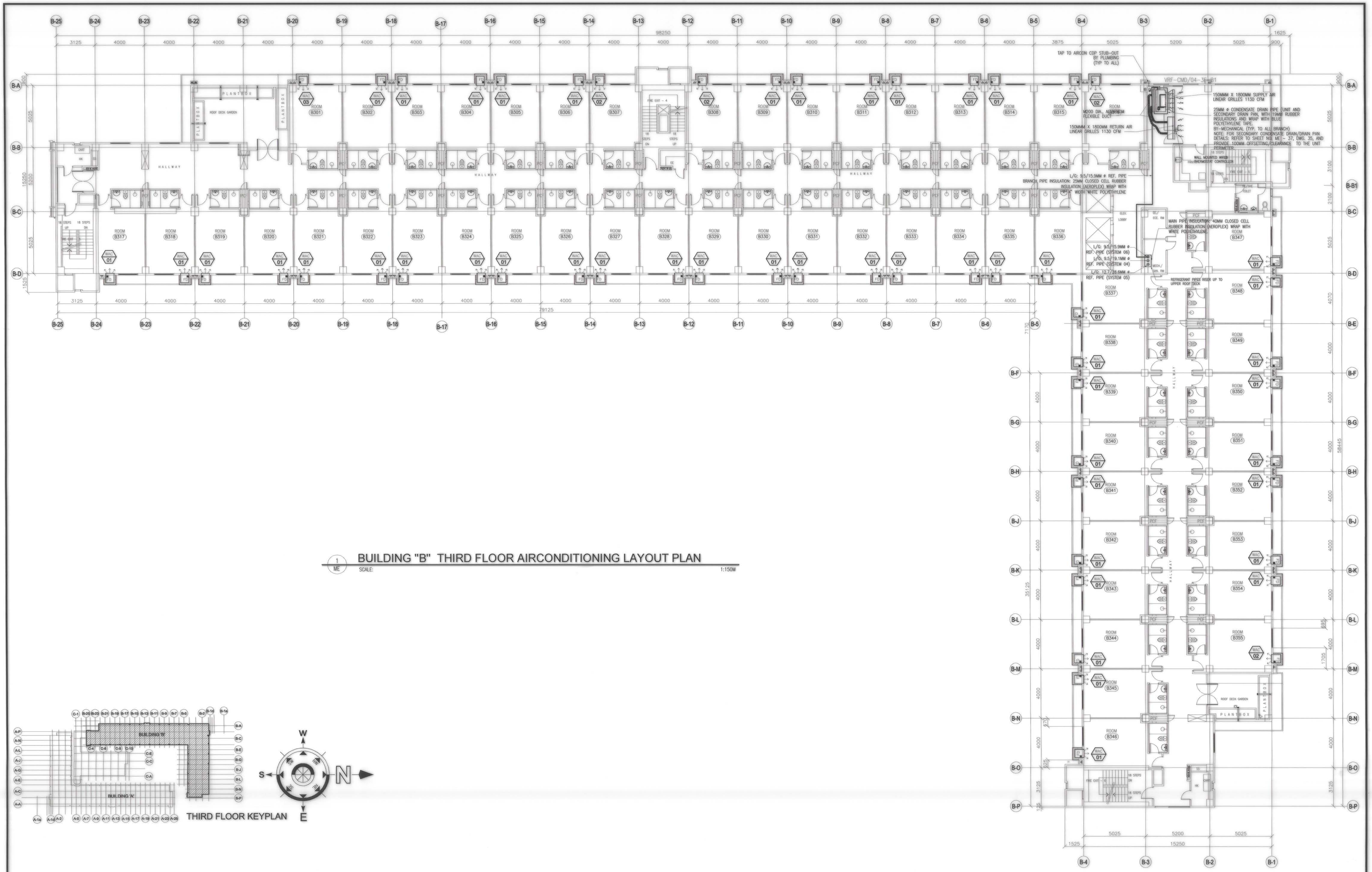
OWNER : NGAC PHASE I JV COMPANY BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON, PRESIDENT AND MTD Clarkmet Inc. PATRICK NICHOLAS P. DAVID, PRESIDENT	PREPARED BY: FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com Tel nos. 355-9365 ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 0032657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 6th Floor Aurora Millenium Bldg., 1045 Aurora Blvd. Quezon City, Philippines 1111 Tel. (632) 421-2071 to 74 Fax. (632) 421-2431 Email : fildravo@yahoo.com.ph Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS 9th Flr. Felize Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: BUILDING "B" SECOND FLOOR AIRCONDITIONING LAYOUT PLAN	SHEET NO. M-04



BUILDING "A" & AMENITY BUILDING ROOF DECK THIRD FLOOR AIRCONDITIONING LAYOUT PLAN

SCALE: 1:150M

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc.	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants	BANDAR HEBAT BUILDERS, INC.	TCGI ENGINEERS	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "A" & AMENITY THIRD FLOOR AIRCONDITIONING LAYOUT PLAN	M-05
VIVENCIO B. DIZON PRESIDENT PATRICK NICHOLAS P. DAVID PRESIDENT	ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 0022657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	ALFREDO R. REVILLA PROJECT MANAGER	ISAAC S. DAVID PRESIDENT	VIRGILIO A. MADRAZO PRESIDENT/CEO			

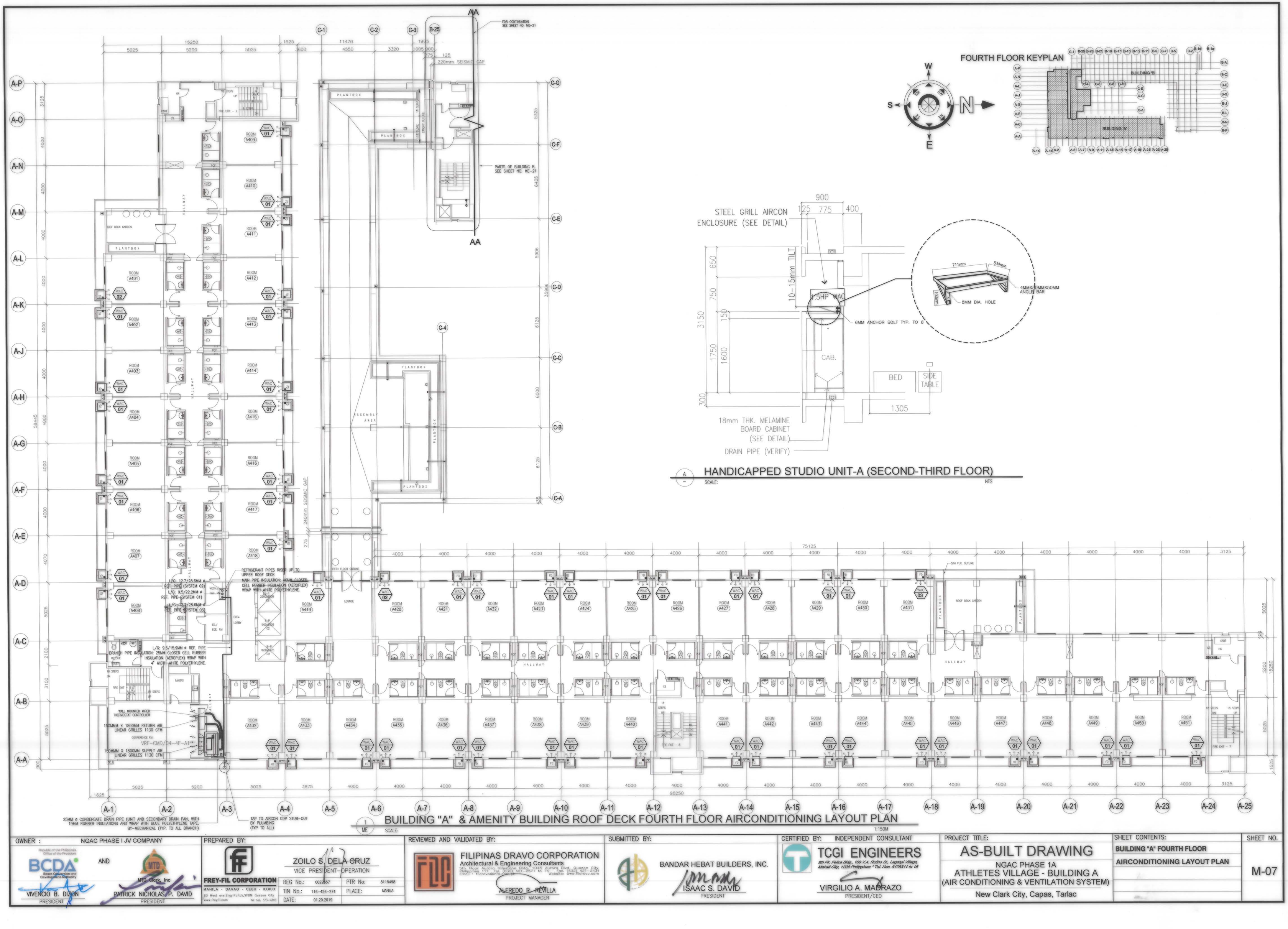


1 ME **BUILDING "B" THIRD FLOOR AIRCONDITIONING LAYOUT PLAN**

SCALE: 1:150M

THIRD FLOOR KEYPLAN

OWNER :	NGAC PHASE I JV COMPANY	PREPARED BY:		REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
Republic of the Philippines Office of the President BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON PRESIDENT	AND MTD MTD Clark, Inc. PATRICK NICHOLAS P. DAVID PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com Tel nos. 373-9345	ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 0022657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg. 1045 Aurora Blvd. Quezon City Philippines 111 Tel. (632) 421-2571 to 74 Fax. (632) 421-2431 Email : fildravo@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS 9th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "B" THIRD FLOOR AIRCONDITIONING LAYOUT PLAN	M-06



BUILDING "A" & AMENITY BUILDING ROOF DECK FOURTH FLOOR AIRCONDITIONING LAYOUT PLAN

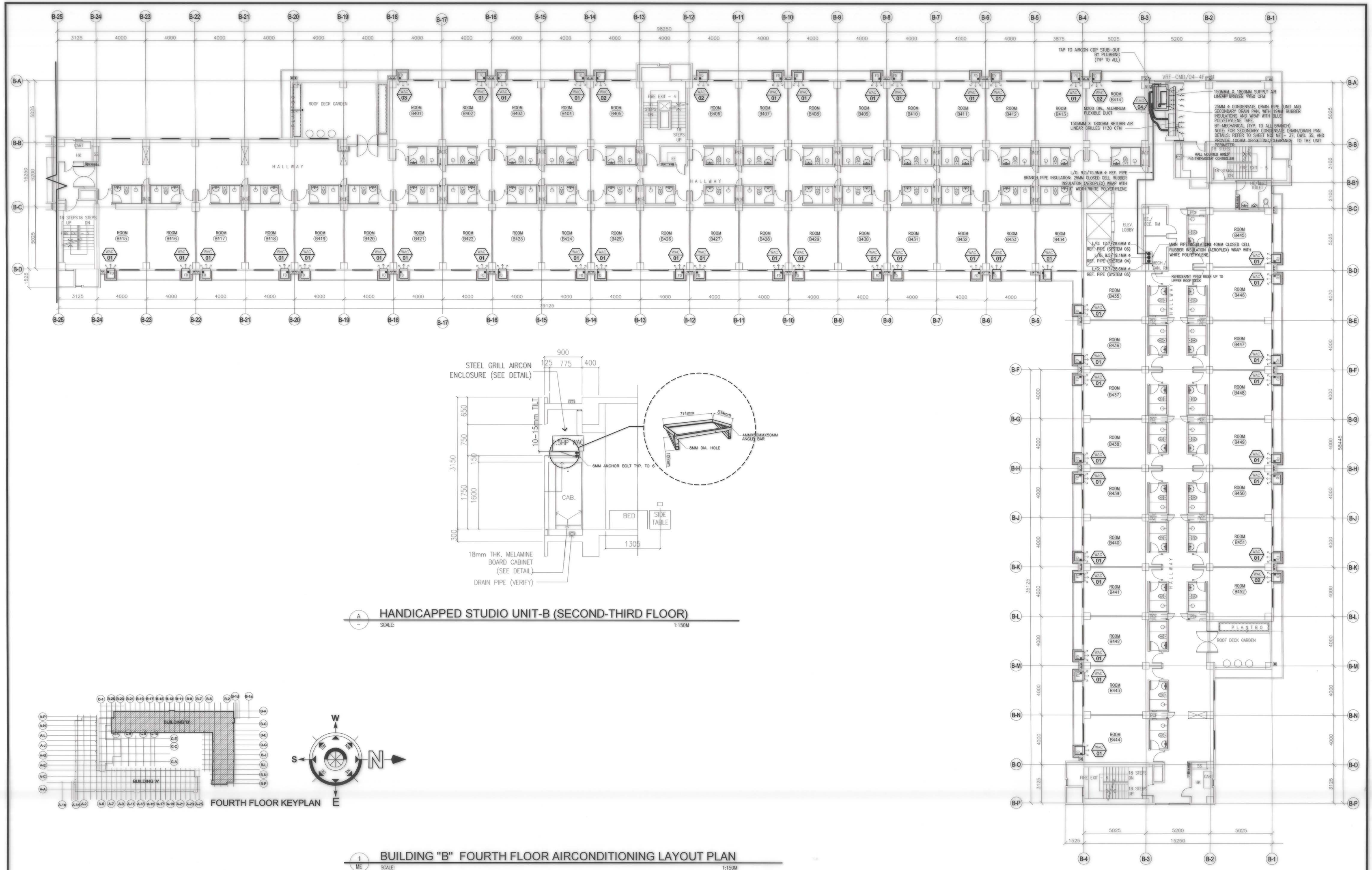
1 ME — SCALE: 1:150M

A — SCALE: NTS

HANDICAPPED STUDIO UNIT-A (SECOND-THIRD FLOOR)

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:
BCDA Bases Conversion and Development Authority — VIVENCIO B. DIZON, PRESIDENT — AND — MTD Clark, Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION — ZOILO S. DELA CRUZ, VICE PRESIDENT–OPERATION — REG No.: 0022857 — TIN No.: 116-426-274 — DATE: 01.20.2019 — PTR No: 8118498 — PLACE: MANILA	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT

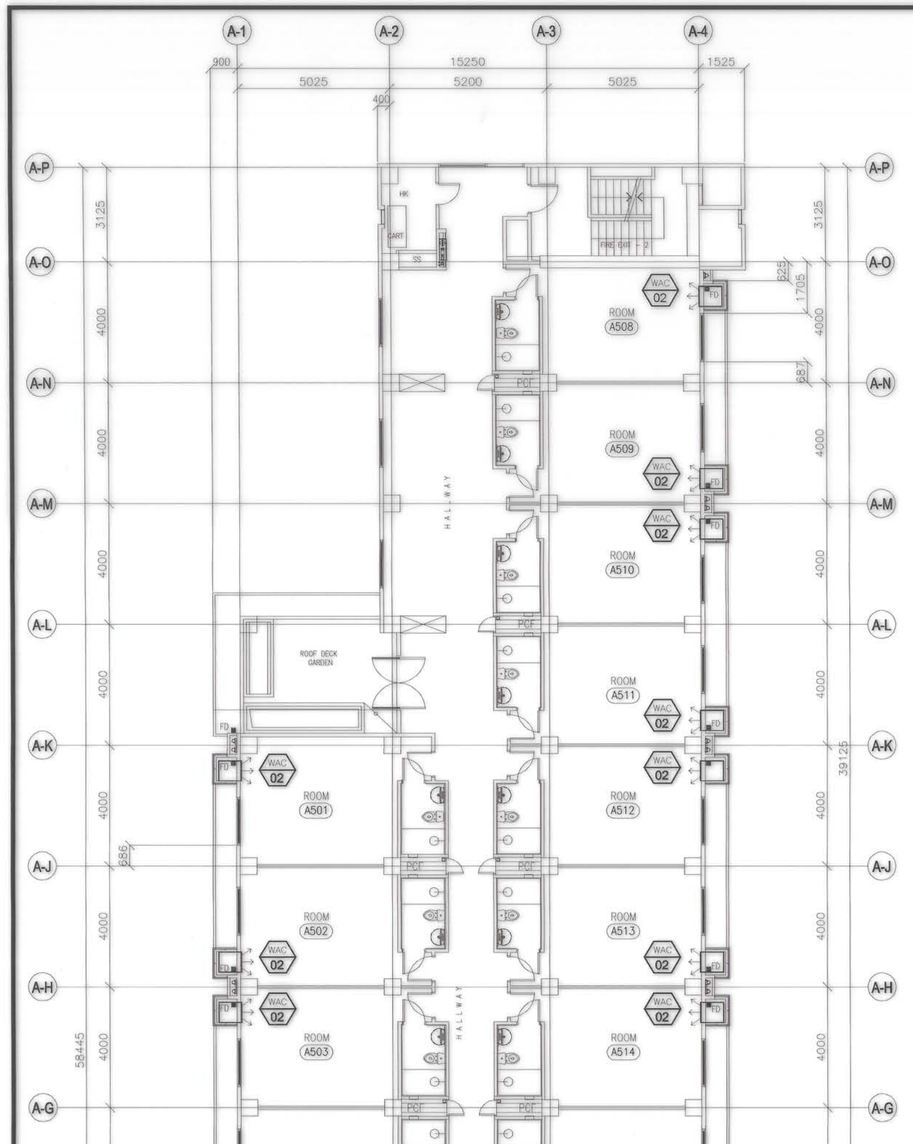
CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING — NGAC PHASE 1A — ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) — New Clark City, Capas, Tarlac	BUILDING "A" FOURTH FLOOR AIRCONDITIONING LAYOUT PLAN	M-07

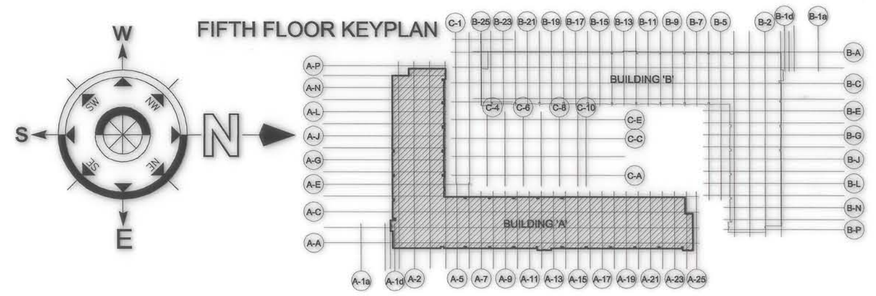


A — HANDICAPPED STUDIO UNIT-B (SECOND-THIRD FLOOR)
SCALE: 1:150M

1 ME — BUILDING "B" FOURTH FLOOR AIRCONDITIONING LAYOUT PLAN
SCALE: 1:150M

OWNER : NGAC PHASE I JV COMPANY BCDA Bases Conversion and Development Authority — AND — MTD Clark, Inc VIVENCIO B. DIZON, PRESIDENT — PATRICK NICHOLAS P. DAVID, PRESIDENT	PREPARED BY: FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com Tel nos. 372-9345 ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG. No.: 0020557 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Metroplex Bldg., 1949 Aurora Blvd., Quezon City, Philippines Tel: (632) 421-2571 to 74 Fax: (632) 421-2431 Email : fildravo@info.com.ph Website: www.fildravo.com ALFREDO B. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS 9th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: BUILDING "B" FOURTH FLOOR AIRCONDITIONING LAYOUT PLAN	SHEET NO. M-08





1 ME — BUILDING "A" FIFTH FLOOR AIRCONDITIONING LAYOUT PLAN

SCALE: 1:150M

OWNER : NGAC PHASE I JV COMPANY BCDA — AND — MTD Clark, Inc VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	PREPARED BY: ZOILO S. DELA CRUZ VICE PRESIDENT–OPERATION FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 63 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com tel nos. 373-9345 REG No.: 0022457 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: BUILDING "A" FIFTH FLOOR AIRCONDITIONING LAYOUT PLAN	SHEET NO. M-09
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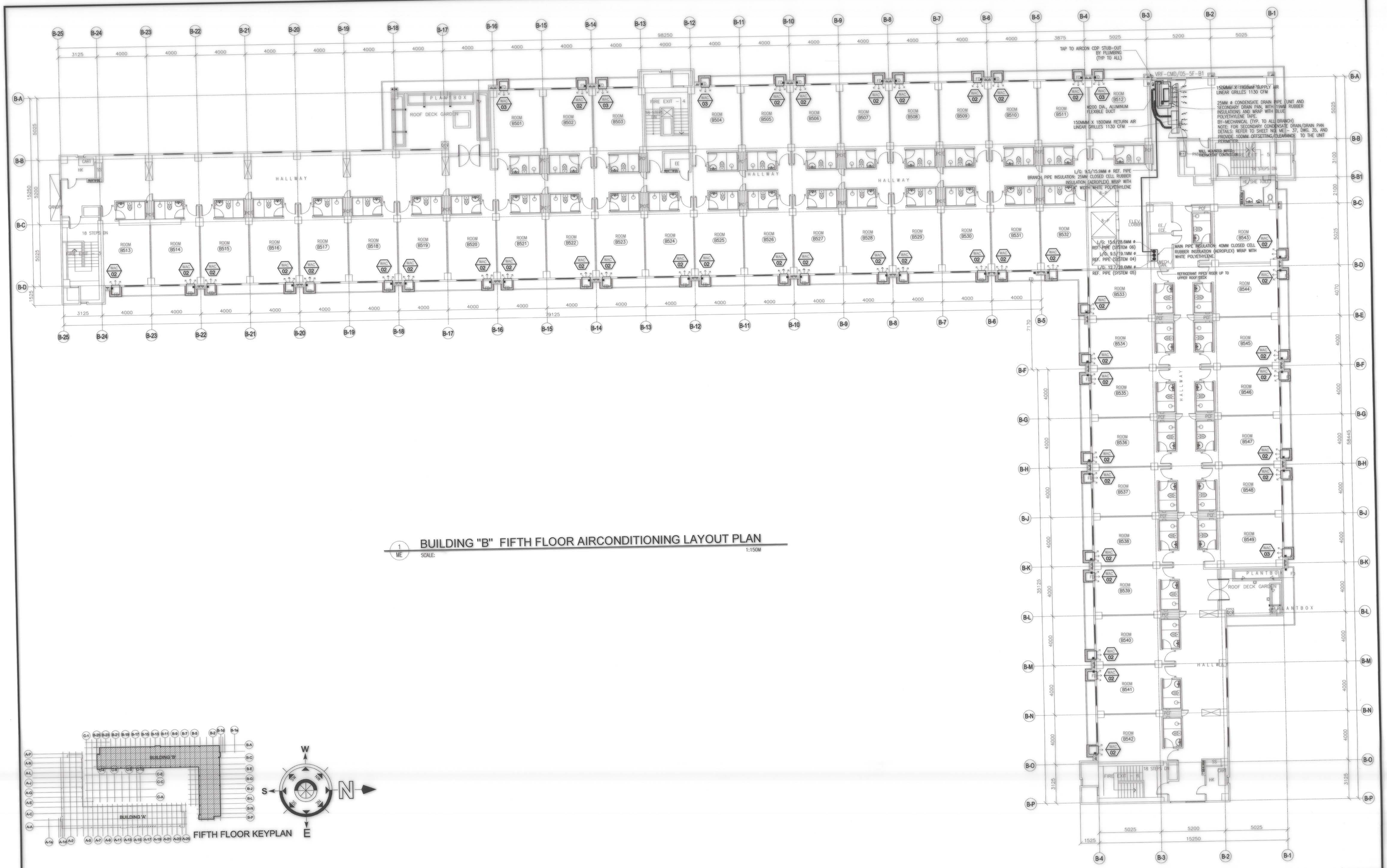


BUILDING "B" FIFTH FLOOR AIRCONDITIONING LAYOUT PLAN

1 ME SCALE: 1:150M

FIFTH FLOOR KEYPLAN

OWNER : NGAC PHASE I JV COMPANY

Republic of the Philippines Office of the President
BCDA Bases Conversion and Development Authority
AND
MTD Clark, Inc.

VIVENCIO B. DIZON
PRESIDENT

PATRICK NICHOLAS P. DAVID
PRESIDENT

PREPARED BY:

FREY-FIL CORPORATION
MANILA - DAVAO - CEBU - ILOILO
83 West ave.Brgy.Paltok,SFDM Quezon City
www.freyfil.com Tel nos. 373-9345

ZOILO S. DELA CRUZ
VICE PRESIDENT-OPERATION

REG No.:	0022657	PTR No:	8118498
TIN No.:	116-426-274	PLACE:	MANILA
DATE:	01.20.2019		

REVIEWED AND VALIDATED BY:

FILIPINAS DRAVO CORPORATION
Architectural & Engineering Consultants
5th Floor Aurora Milestone Bldg. 1045 Aurora Blvd. Quezon City Philippines 111 Tel. (632) 421-2571 to 74 Fax: (632) 421-2431
Email : fildravo@info.com.ph Website: www.fildravo.com

ALFREDO R. REVILLA
PROJECT MANAGER

SUBMITTED BY:

BANDAR HEBAT BUILDERS, INC.

ISAAC S. DAVID
PRESIDENT

CERTIFIED BY: INDEPENDENT CONSULTANT

TCGI ENGINEERS
9th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16

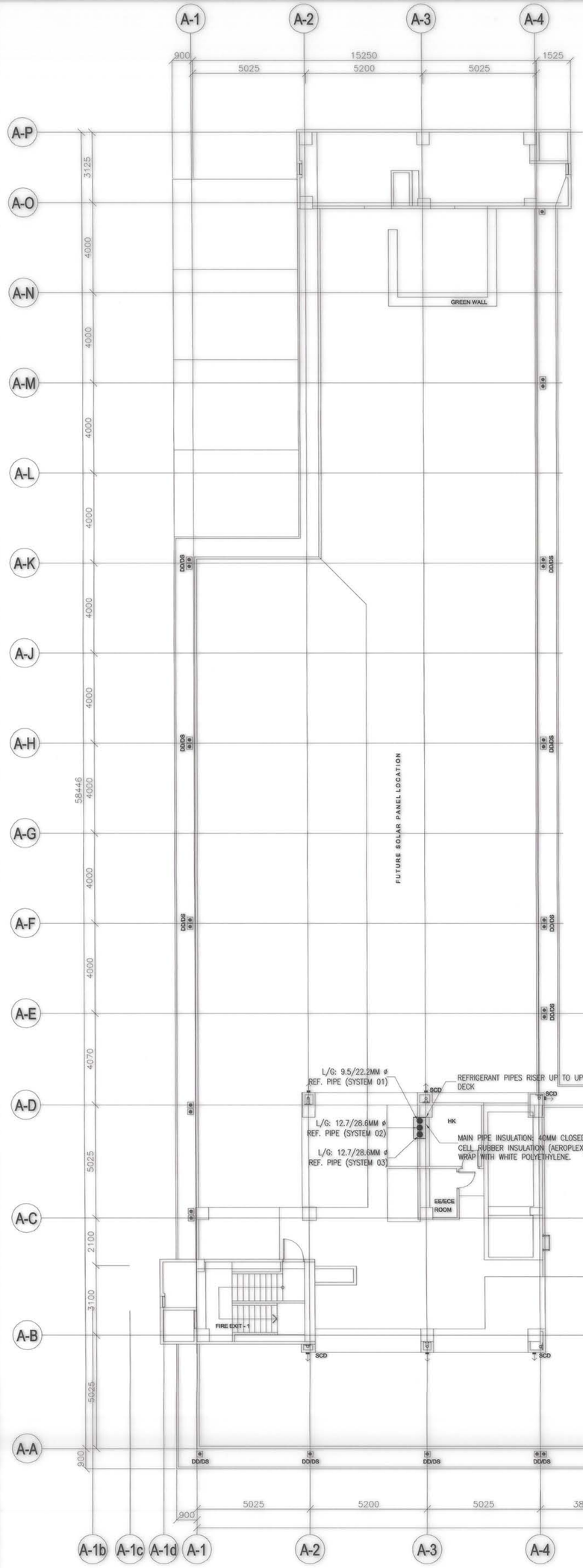
VIRGILIO A. MADRAZO
PRESIDENT/CEO

PROJECT TITLE:

AS-BUILT DRAWING
NGAC PHASE 1A
ATHLETES VILLAGE - BUILDING B
(AIR CONDITIONING & VENTILATION SYSTEM)
New Clark City, Capas, Tarlac

SHEET CONTENTS:
BUILDING "B" FIFTH FLOOR
AIRCONDITIONING LAYOUT PLAN

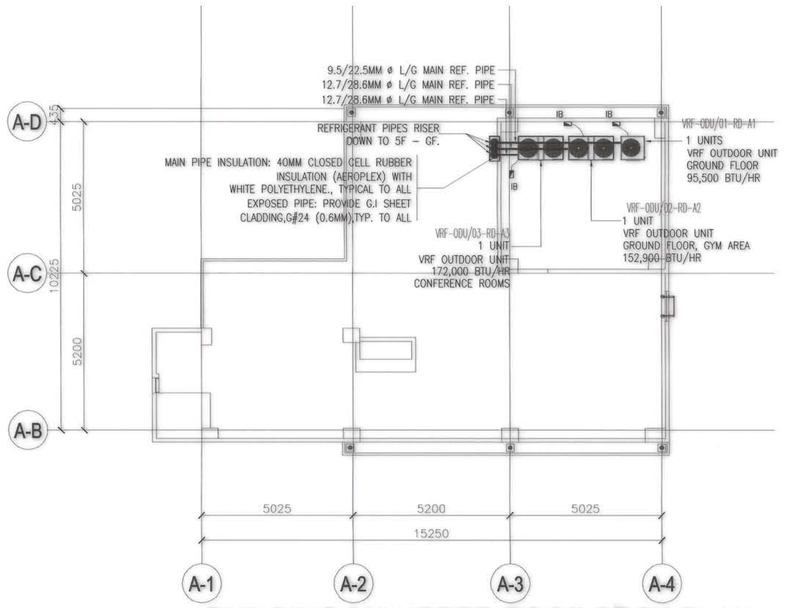
SHEET NO.
M-10



A-1 A-2 A-3 A-4

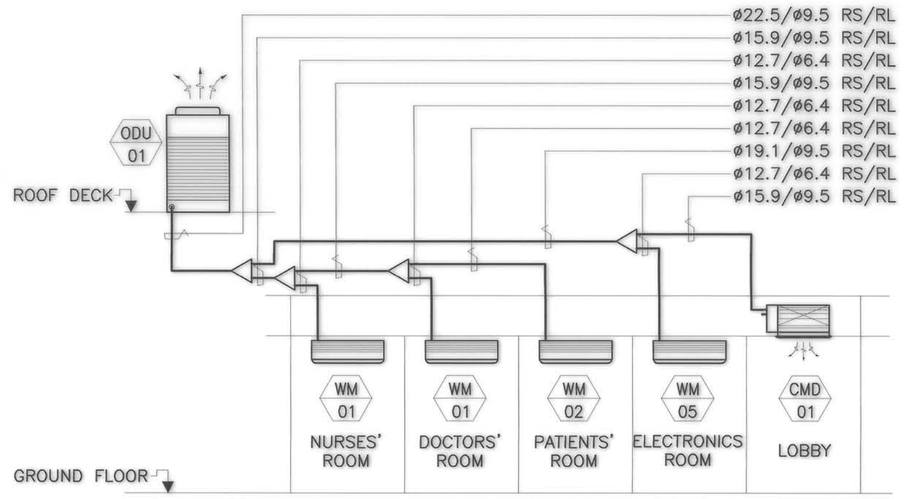
A SCALE 1:100 m

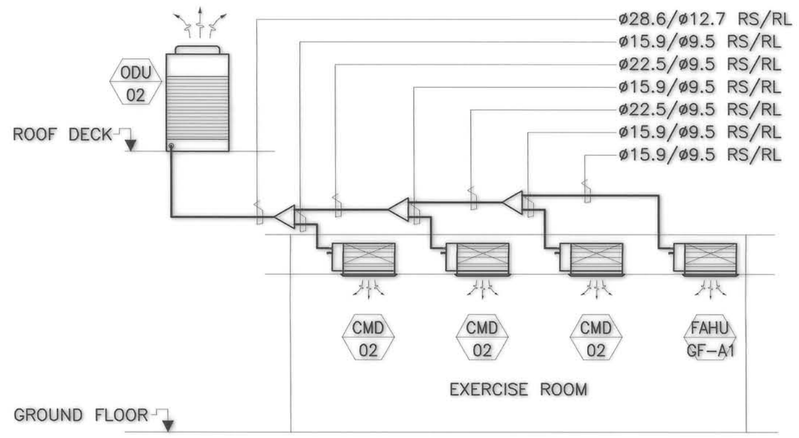
BUILDING "A" UPPER ROOF DECK PLAN

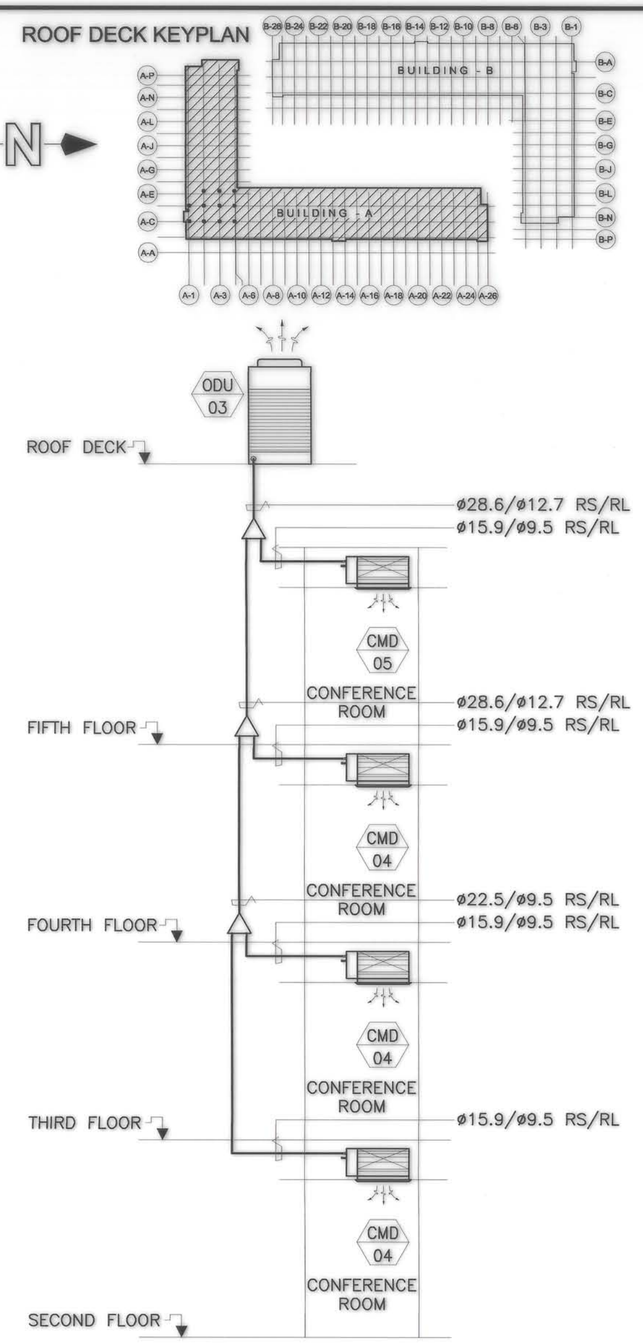


BUILDING "A" UPPER ROOF DECK PLAN

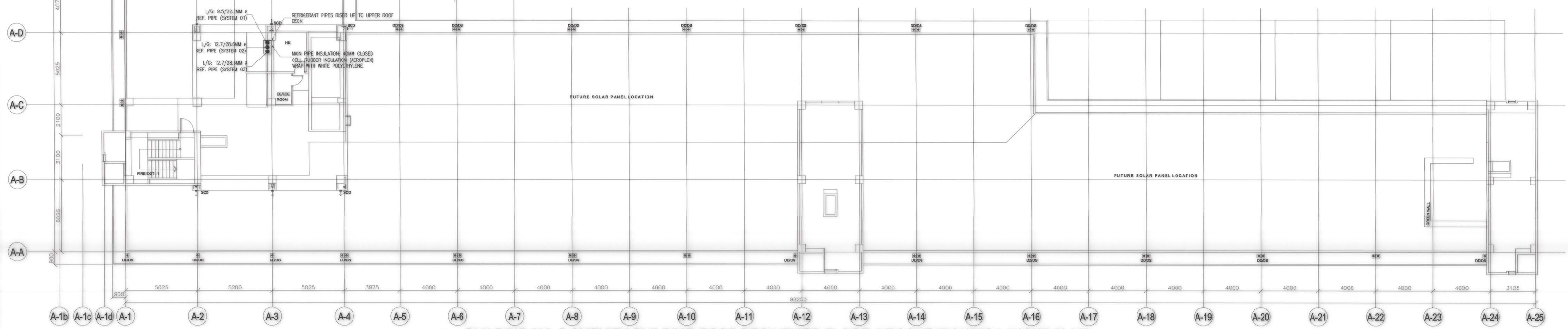
A SCALE 1:100 m







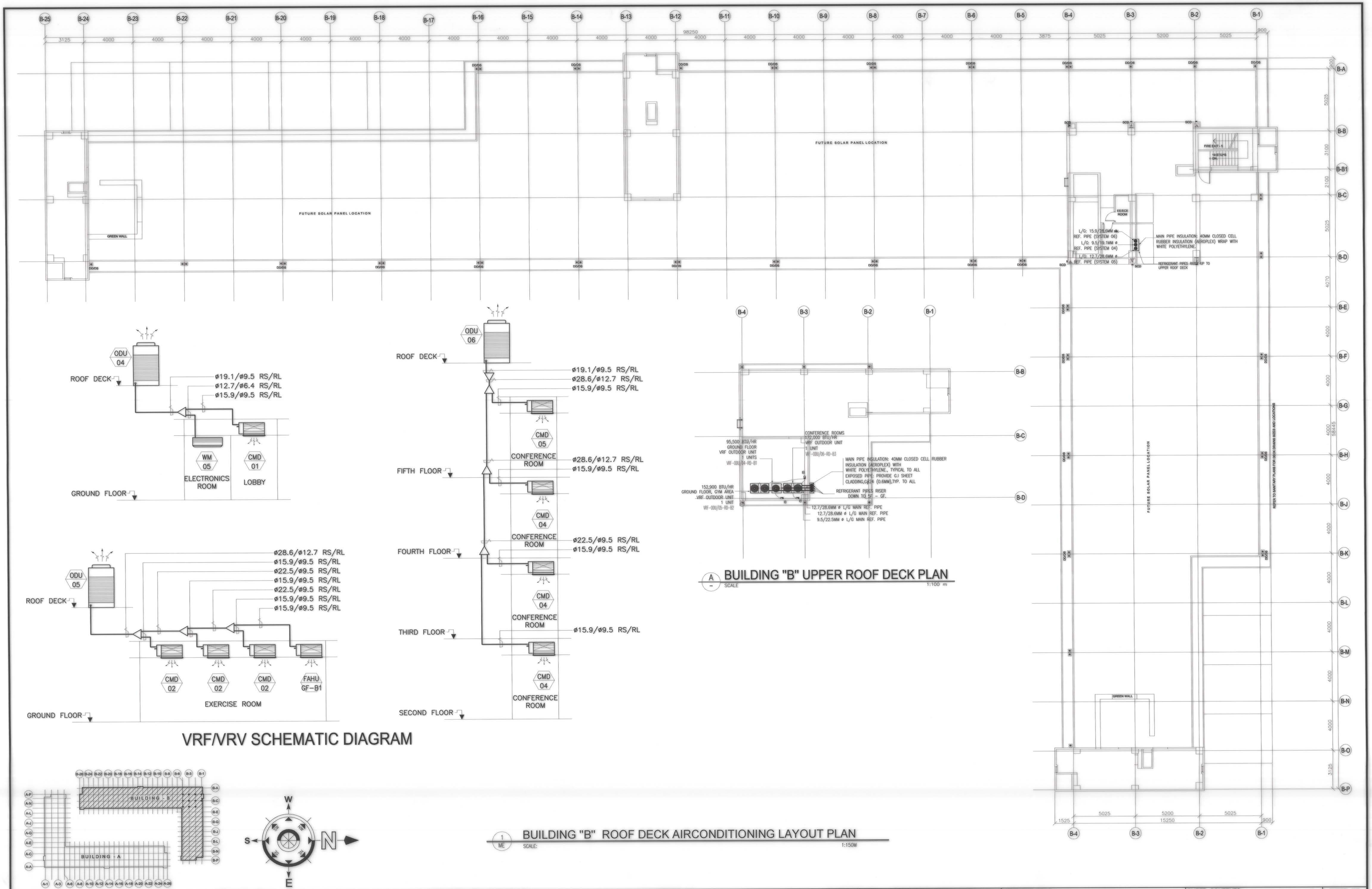
VRF/VRV SCHEMATIC DIAGRAM



1 ME SCALE: 1:150M

BUILDING "A" & AMENITY BUILDING ROOF DECK THIRD FLOOR AIRCONDITIONING LAYOUT PLAN

OWNER : NGAC PHASE I JV COMPANY BCDA Bases Conversion and Development Authority VIVENCIO B. BIZON, PRESIDENT AND MTD Clark, Inc. PATRICK NICHOLAS P. DAVID, PRESIDENT	PREPARED BY: FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com Tel nos. 373-9345 ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 0022657 TIN No.: 116-426-274 DATE: 01.20.2019 PTR No: 8118498 PLACE: MANILA	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg. 1045 Aurora Blvd. Quezon City, Philippines 1111 • Tel. (632) 421-2571 to 74 Fax: (632) 421-2431 Email : fildravo@ecom.ph Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS 5th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 18 VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: BUILDING "A" ROOF DECK AIRCONDITIONING LAYOUT PLAN	SHEET NO. M-11

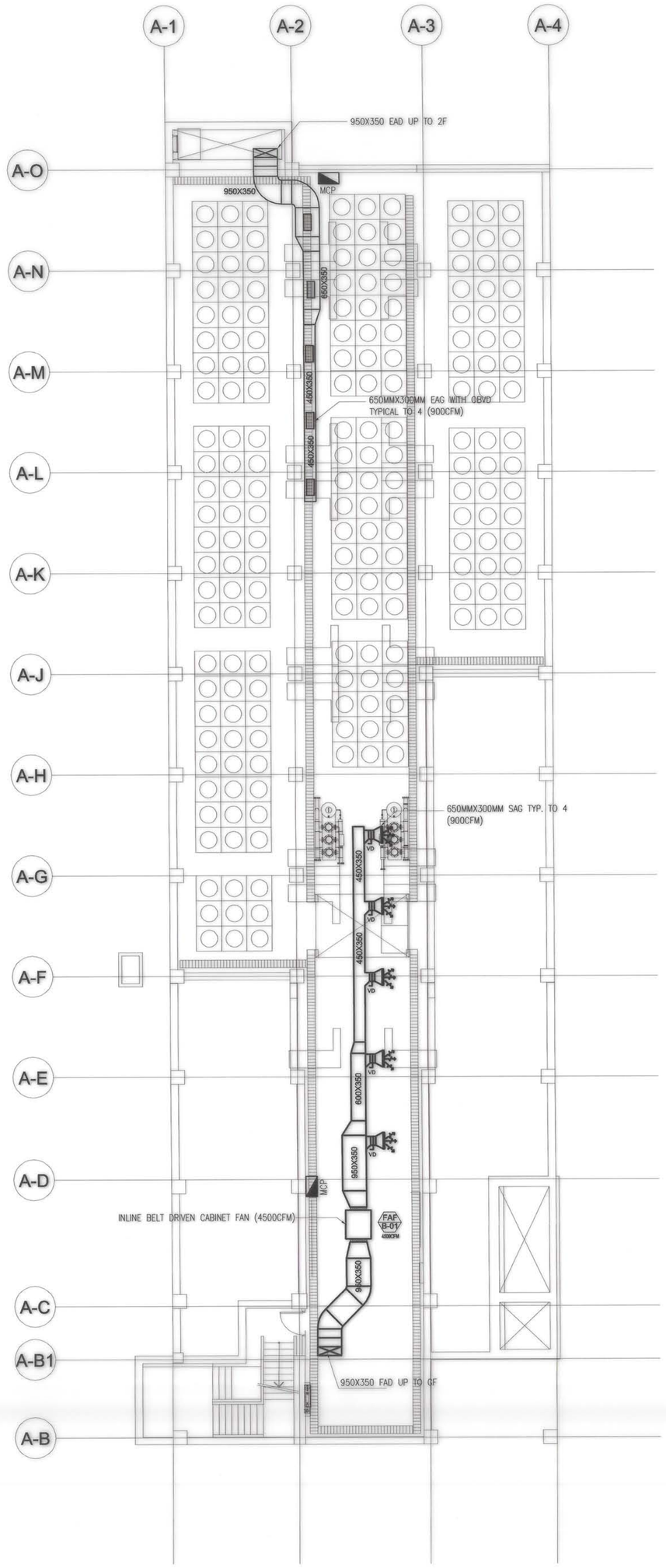


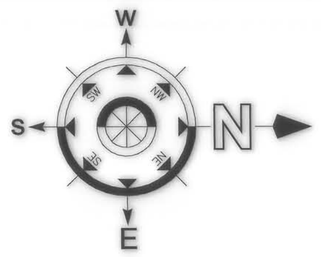
A BUILDING "B" UPPER ROOF DECK PLAN
SCALE 1:100 m

VRF/VRV SCHEMATIC DIAGRAM

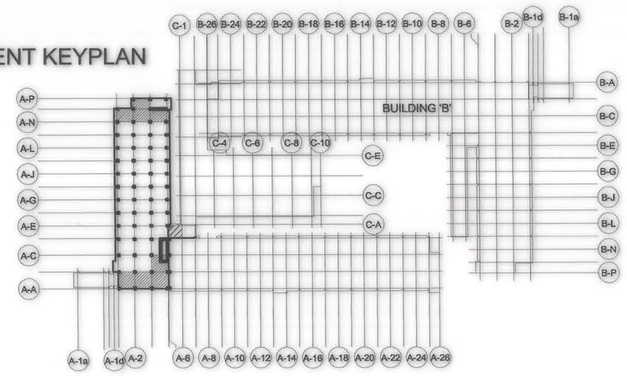
1 BUILDING "B" ROOF DECK AIRCONDITIONING LAYOUT PLAN
SCALE: 1:150M

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO ZOILO S. DELA CRUZ VICE PRESIDENT - OPERATION REG No.: 0022657 / PTR No: 8118498 TIN No.: 116-426-274 / PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "B" ROOF DECK AIRCONDITIONING LAYOUT PLAN	M-12





BASEMENT KEYPLAN

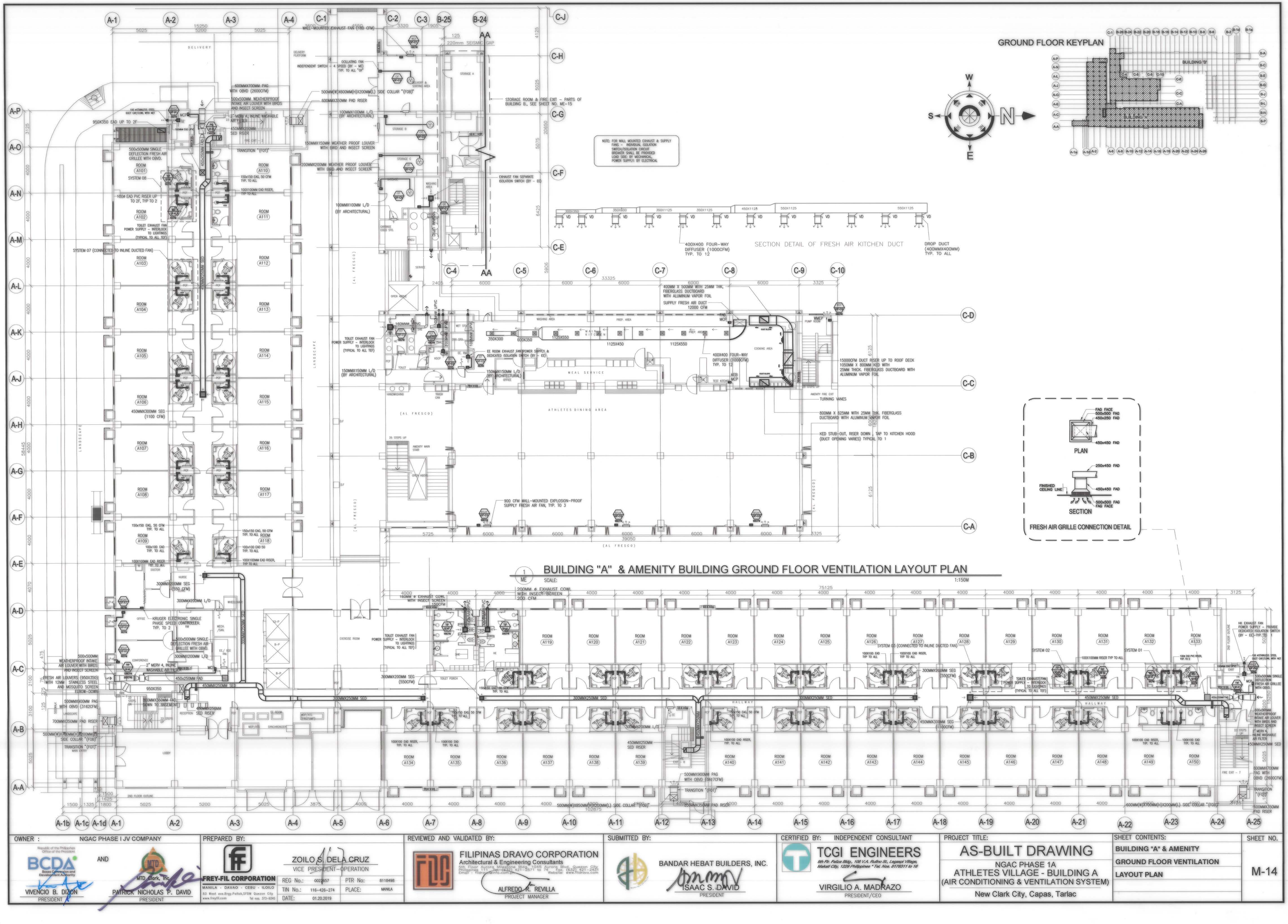


1 ME BUILDING "A" BASEMENT FLOOR VENTILATION LAYOUT PLAN

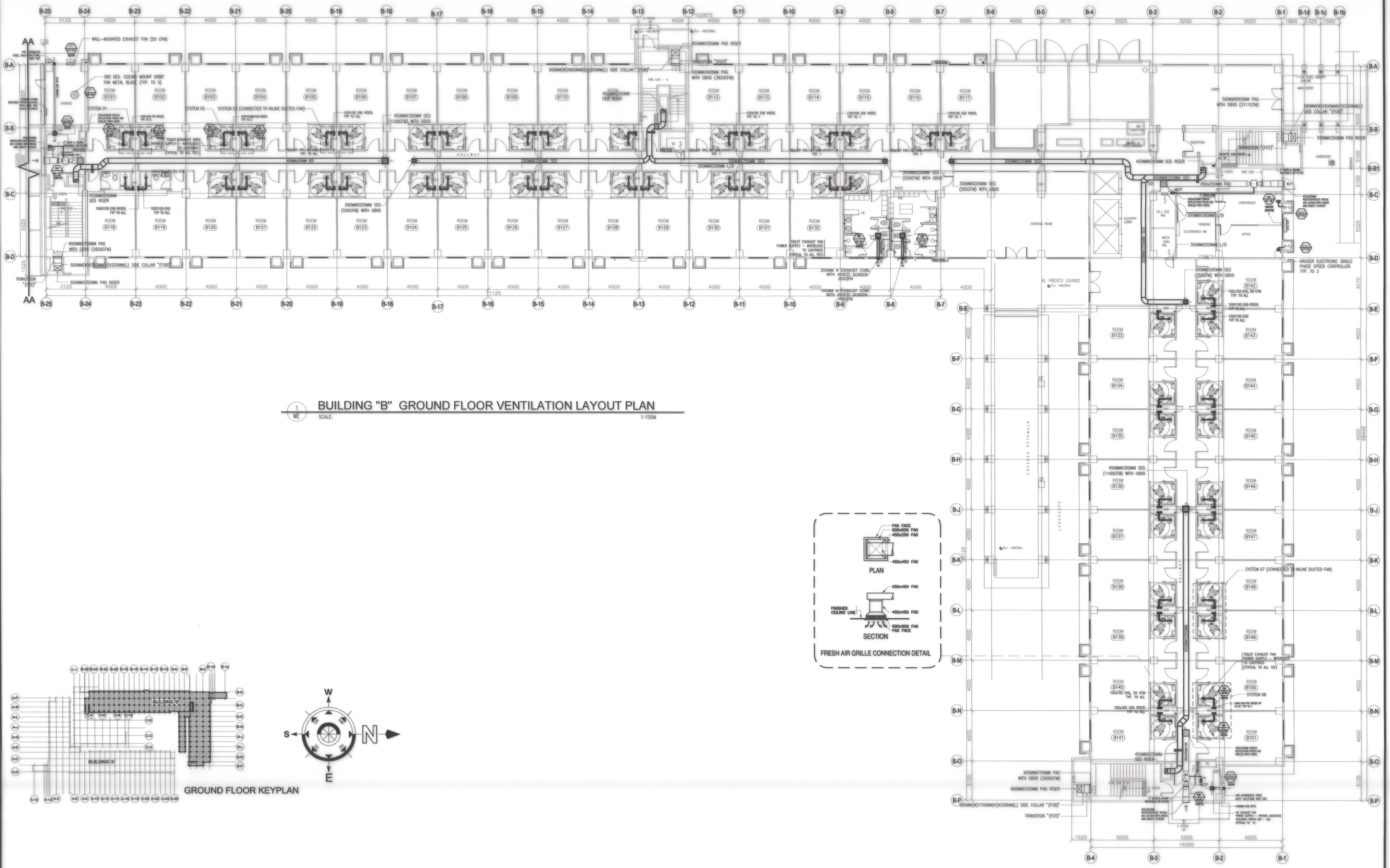
SCALE: 1:150M

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:
BCDA Bases Conversion and Development Authority — AND — MTD Clark, Inc	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 53 West ave.Brgy.Paltok,QFDN Quezon City www.freyfil.com Tel nos. 373-9345	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg. 1045 Aurora Blvd. Quezon City Philippines 111 Tel: (632) 421-2571 to 74 Fax: (632) 421-2431 Email : fildravo@yahoo.com.ph Website: www.fildravo.com	BANDAR HEBAT BUILDERS, INC.
VIVENCIO B. DIZON PRESIDENT	ZOILO S. DELA CRUZ VICE PRESIDENT–OPERATION REG No.: 0023657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	ALFREDO R. REVILLA PROJECT MANAGER	ISAAC S. DAVID PRESIDENT
PATRICK NICHOLAS P. DAVID PRESIDENT			

CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
TCGI ENGINEERS *9th Flr. Felize Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 18* VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "A" BASEMENT FLOOR VENTILATION LAYOUT PLAN	M-13



OWNER : NGAC PHASE I JV COMPANY BCDA Bases Conversion and Development Authority – VIVENCIO B. DIZON, PRESIDENT AND MTD Clark, Inc. – PATRICK NICHOLAS P. DAVID, PRESIDENT	PREPARED BY: ZOILO S. DELA CRUZ VICE PRESIDENT–OPERATION FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com Tel nos. 373-9345 REG No.: 0022857 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg. 1045 Aurora Blvd. Quezon City, Philippines 1111 Tel: (632) 421-2571 to 74 Fax: (632) 421-2431 Email : filipinas@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS 5th Flr. Felicia Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8175211 to 16 VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: BUILDING "A" & AMENITY GROUND FLOOR VENTILATION LAYOUT PLAN	SHEET NO. M-14



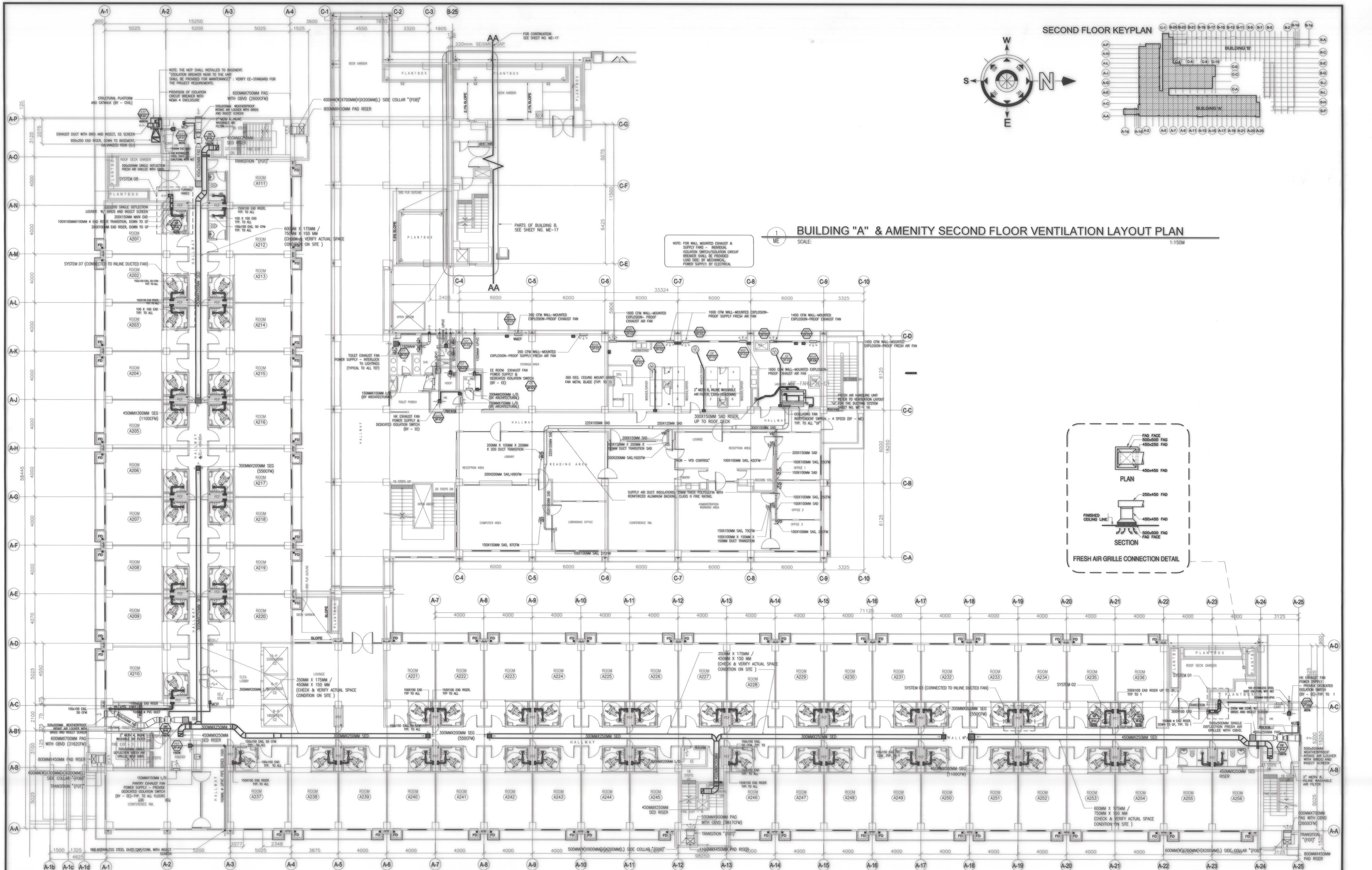
1 ME

BUILDING "B" GROUND FLOOR VENTILATION LAYOUT PLAN

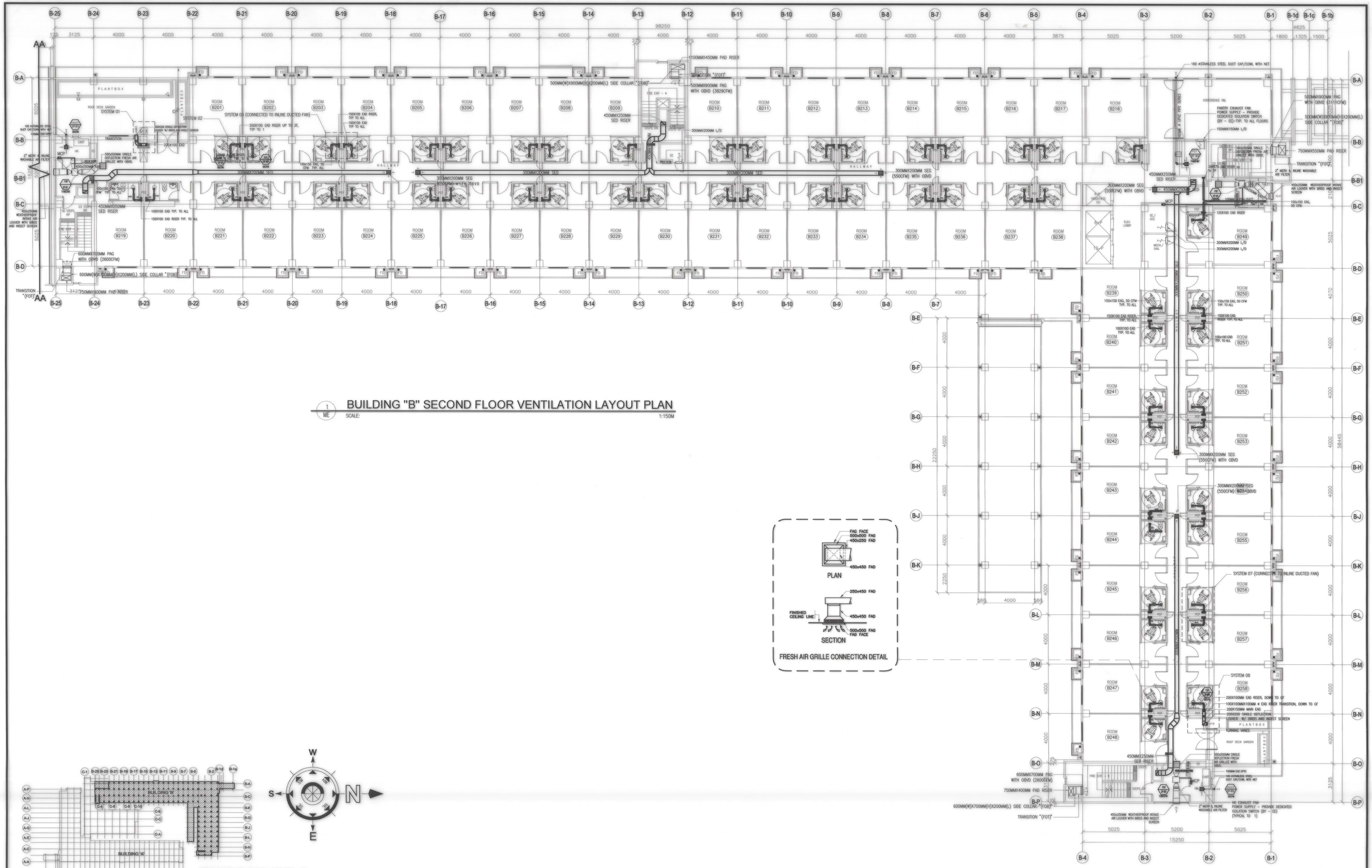
SCALE: 1:150M

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:
BCDA Bases Conversion and Development Authority — VIVENCIO B. DIZON, PRESIDENT	FREY-FIL CORPORATION — ZOILO S. DELA CRUZ, VICE PRESIDENT / OPERATION	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT
AND	REG No.: 0022657 · PTR No: 8118498 · TIN No.: 116-426-274 · PLACE: MANILA · DATE: 01.20.2019		
MTD Clark, Inc — PATRICK NICHOLAS P. DAVID, PRESIDENT			

CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
TCGI ENGINEERS, 5th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "B" GROUND FLOOR VENTILATION LAYOUT PLAN	M-15



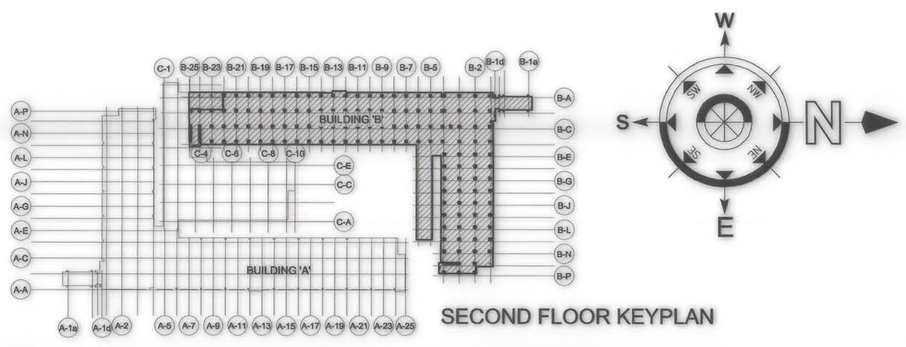
OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON, PRESIDENT; PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION, MANILA - DAVAO - CEBU - ILOILO. ZOILO S. DELA CRUZ, VICE PRESIDENT - OPERATION. REG No.: 0032657; PTR No: 8118498; TIN No.: 118-426-274; PLACE: MANILA; DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants. ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS. VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING. NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM). New Clark City, Capas, Tarlac	BUILDING "A" & AMENITY SECOND FLOOR VENTILATION LAYOUT PLAN	M-16



1 ME BUILDING "B" SECOND FLOOR VENTILATION LAYOUT PLAN

SCALE: 1:150M

FRESH AIR GRILLE CONNECTION DETAIL



SECOND FLOOR KEYPLAN

OWNER : NGAC PHASE I JV COMPANY BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON PRESIDENT AND MTD Group, Inc. PATRICK NICHOLAS P. DAVID PRESIDENT	PREPARED BY: FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com Tel nos. 373-9345 ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 0026557 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg., 1045 Aurora Blvd. Quezon City, Philippines 1111 Tel. (632) 421-2577 to 79 Fax (632) 421-2431 Email : fildravo@pldt.com.ph Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS *4th Flr. Felisa Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16* VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: BUILDING "B" SECOND FLOOR VENTILATION LAYOUT PLAN	SHEET NO. M-17

BUILDING "A" & AMENITY BUILDING ROOF DECK THIRD FLOOR VENTILATION LAYOUT PLAN

1 ME — SCALE: 1:150M

THIRD FLOOR KEYPLAN

PLAN / ELEVATION

50 CFM — TOILET DOOR

(150MM X 600MM): PROPOSED SIZE FOR TOILET DOOR LOUVERS

A — SCALE NTS — TOILET DOOR LOUVER

ELEVATION

10MM DOOR UNDERCUT FOR MAXIMUM 50 CFM AIRFLOW ONLY (PROVISION FOR STUDIO UNITS DOOR)

ENTRY OF AIR – FROM SUPPLY AIR OF FRESH AIR FANS AT HALLWAY.

B — SCALE NTS — STUDIO UNIT/S DOOR

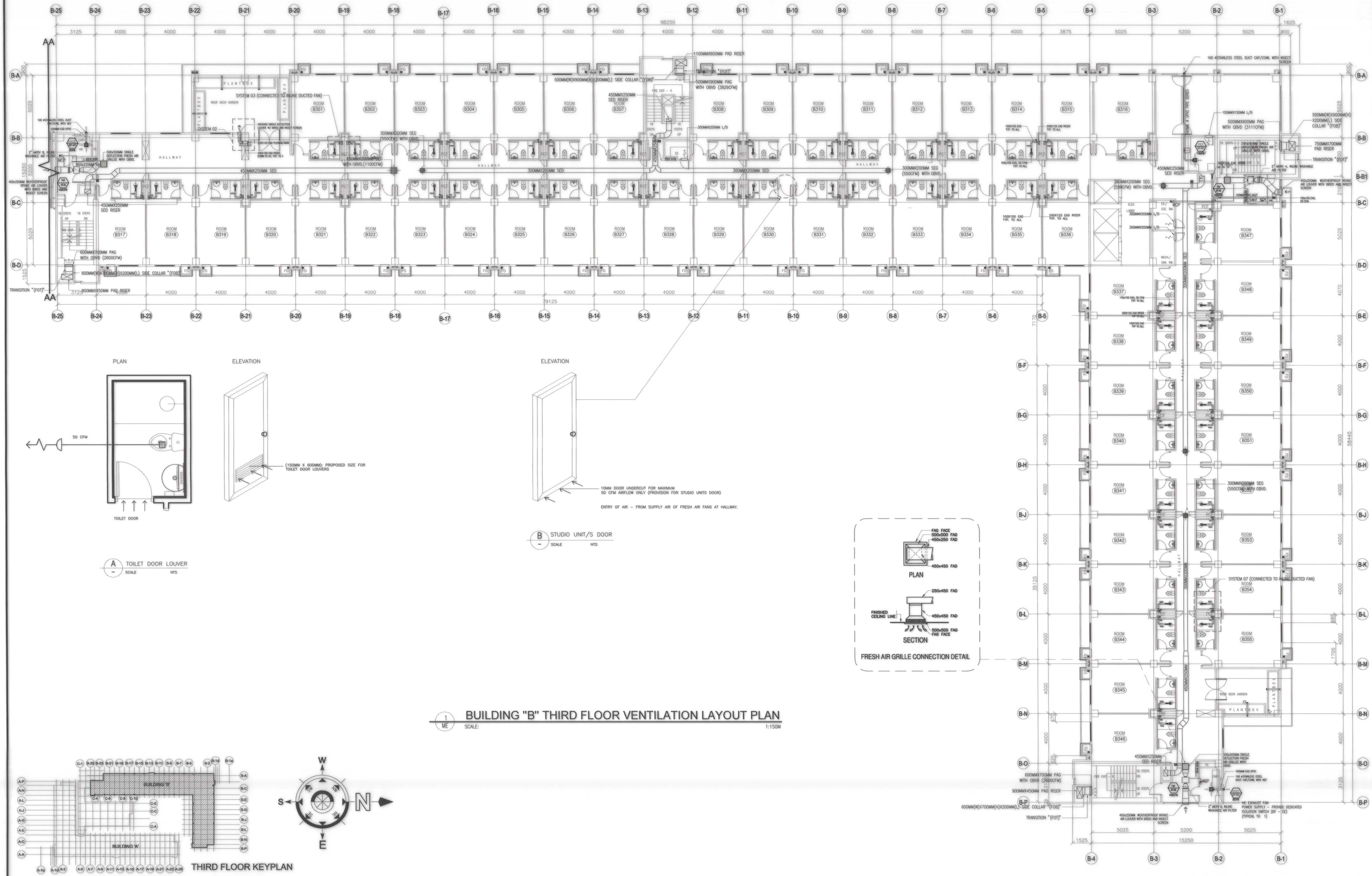
PLAN

SECTION

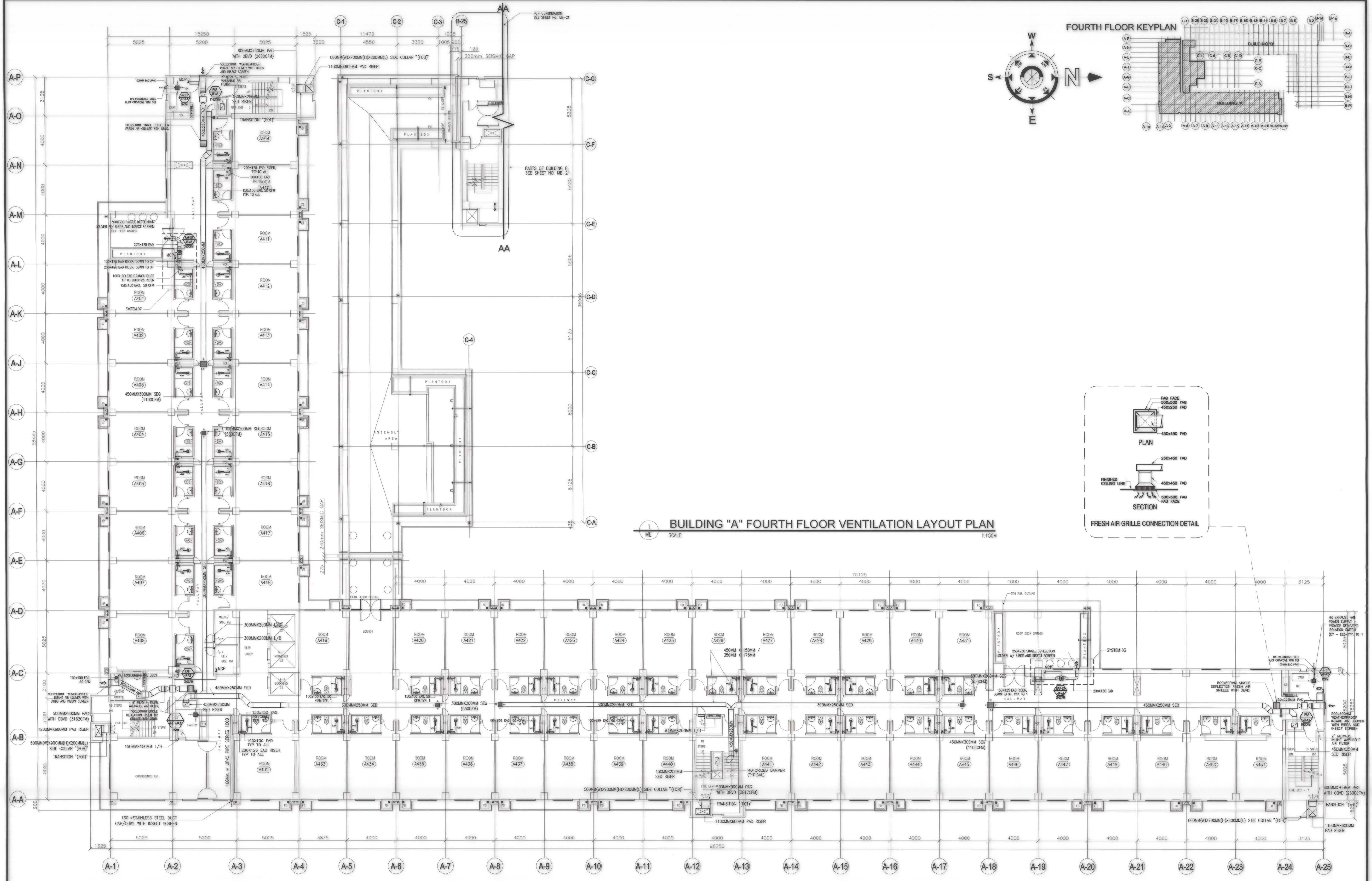
FRESH AIR GRILLE CONNECTION DETAIL

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:
BCDA — VIVENCIO B. DIZON, PRESIDENT	FREY-FIL CORPORATION — ZOILO S. DELA CRUZ, VICE PRESIDENT - OPERATION	FILIPINAS DRAVO CORPORATION — Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT
AND	REG No.: 0023657 · PTR No: 8118498 · TIN No.: 116-426-274 · PLACE: MANILA · DATE: 01.20.2019		
MTD Construction — PATRICK NICHOLAS P. DAVID, PRESIDENT			

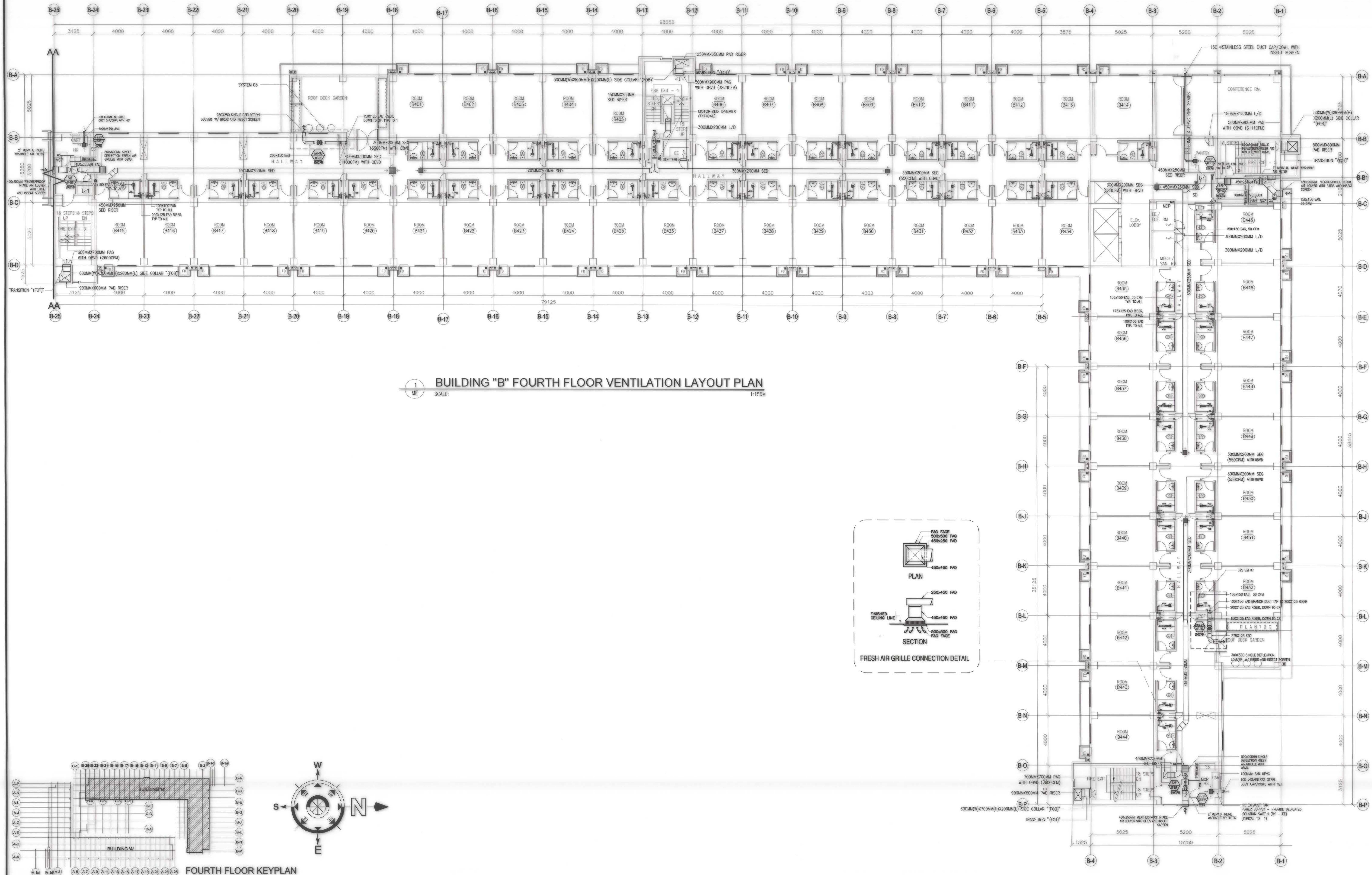
CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING — NGAC PHASE 1A — ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) — New Clark City, Capas, Tarlac	BUILDING "A" & AMENITY — THIRD FLOOR VENTILATION — LAYOUT PLAN	M-18



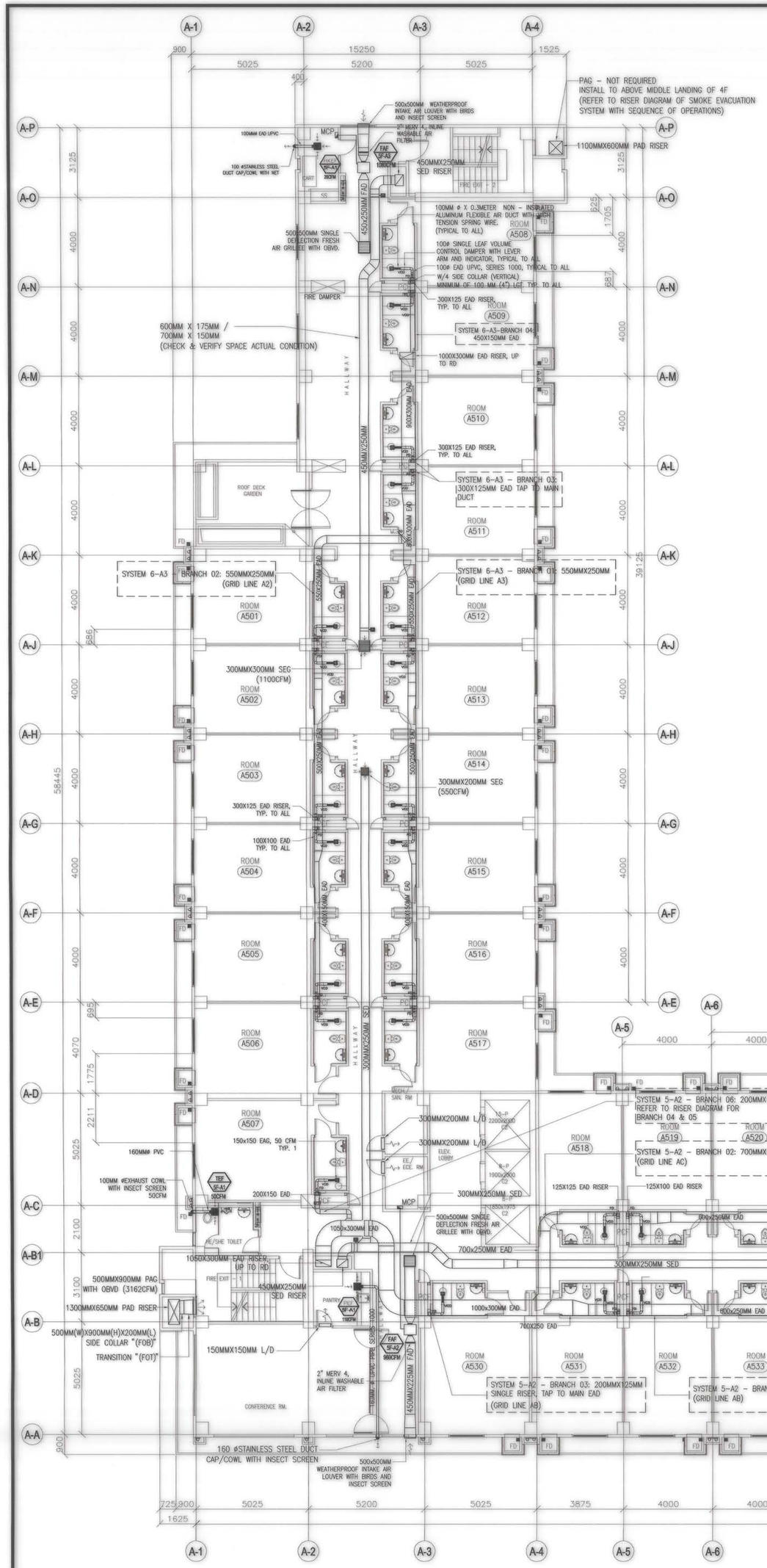
OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc.	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants	BANDAR HEBAT BUILDERS, INC.	TCGI ENGINEERS	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "B" THIRD FLOOR VENTILATION LAYOUT PLAN	M-19
VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 0022657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	ALFREDO R. REVILLA PROJECT MANAGER	ISAAC S. DAVID PRESIDENT	VIRGILIO A. MADRAZO PRESIDENT/CEO			



OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO ZOILO S. DELA CRUZ VICE PRESIDENT - OPERATION REG No.: 0022657 · PTR No: 8118498 TIN No.: 116-426-274 · PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "A" FOURTH FLOOR VENTILATION LAYOUT PLAN	M-20



OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION ZOILO S. DELA CRUZ VICE PRESIDENT - OPERATION REG No.: 002657 · PTR No: 8118498 TIN No.: 116-426-274 · PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "B" FOURTH FLOOR VENTILATION LAYOUT PLAN	M-21



BUILDING "A" FIFTH FLOOR VENTILATION LAYOUT PLAN

1 ME

SCALE: 1:150M

ENLARGE PLAN DETAILS OF TOILET EXHAUST AIR GRILLE AND BRANCH DUCT TYPICAL TO ALL FLOOR

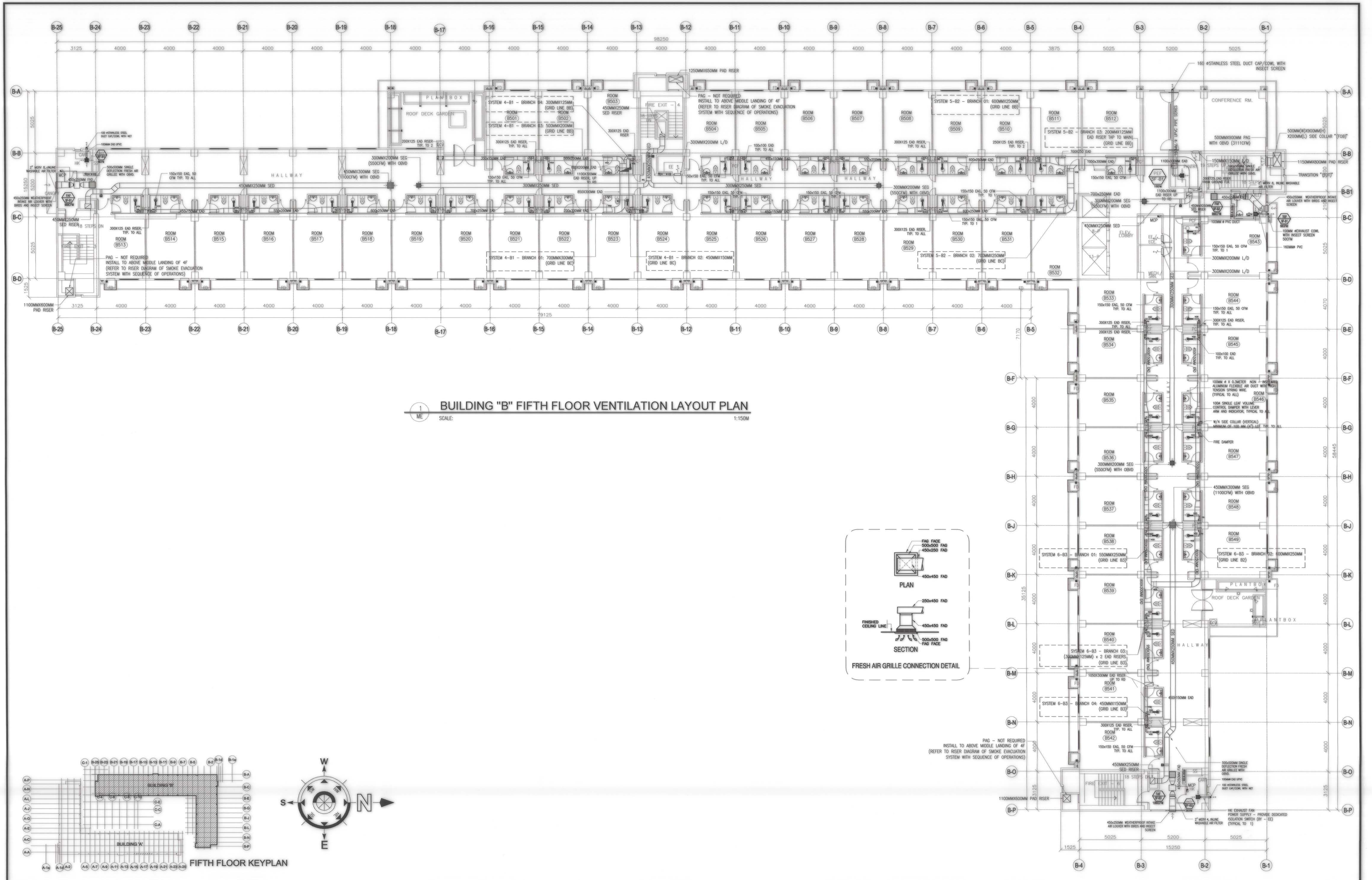
A

SCALE: 1:50M

FRESH AIR GRILLE CONNECTION DETAIL

FIFTH FLOOR KEYPLAN

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA Bases Conversion and Development Authority Republic of the Philippines Office of the President VIVENCIO B. DIZON PRESIDENT AND MTD Clark, Inc. PATRICK NICHOLAS P. DAVID PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com Tel nos. 373-9345 ZOILO S. DELA CRUZ VICE PRESIDENT - OPERATION REG No.: 0022657 TIN No.: 116-426-274 DATE: 01.20.2019 PTR No: 8118498 PLACE: MANILA	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg. 1045 Aurora Blvd. Quezon City Philippines 111 Tel. (632) 421-2571 to 74 Fax. (632) 421-2431 Email : fildravo@info.com.ph Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS 9th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "A" FIFTH FLOOR VENTILATION LAYOUT PLAN	M-22

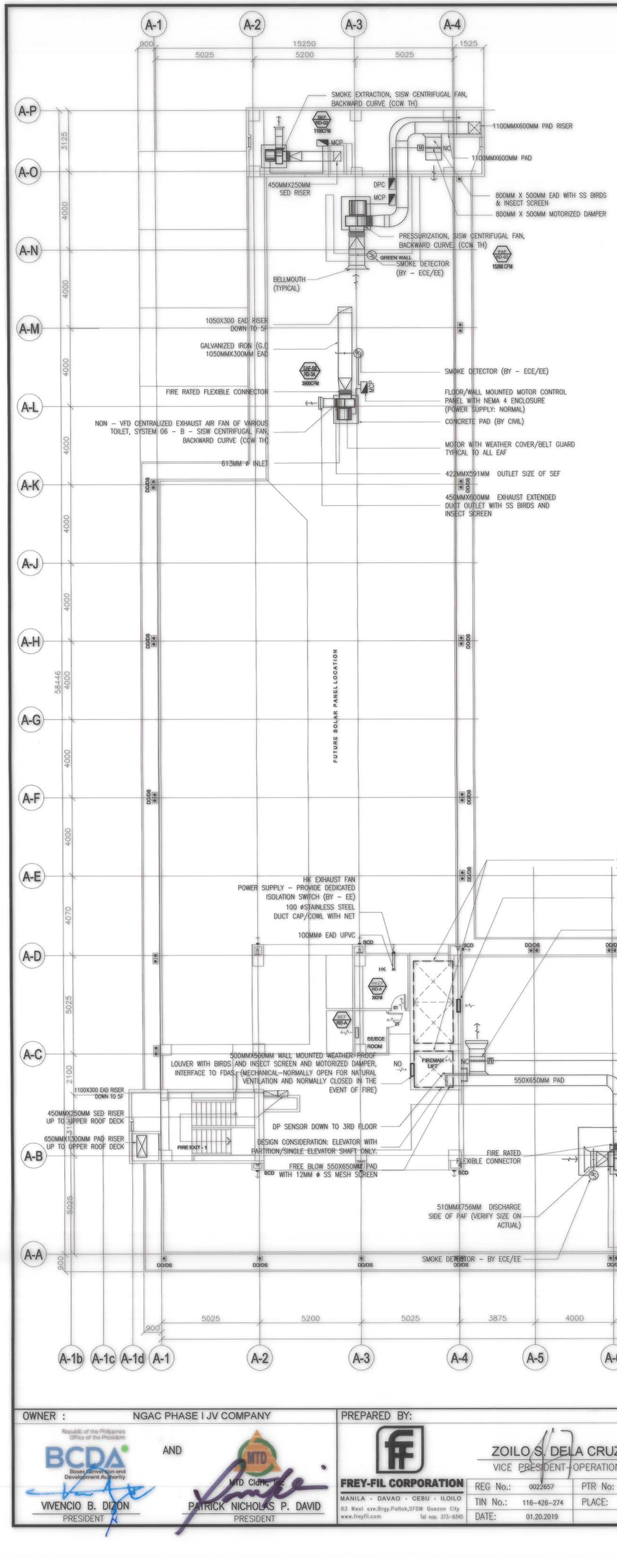


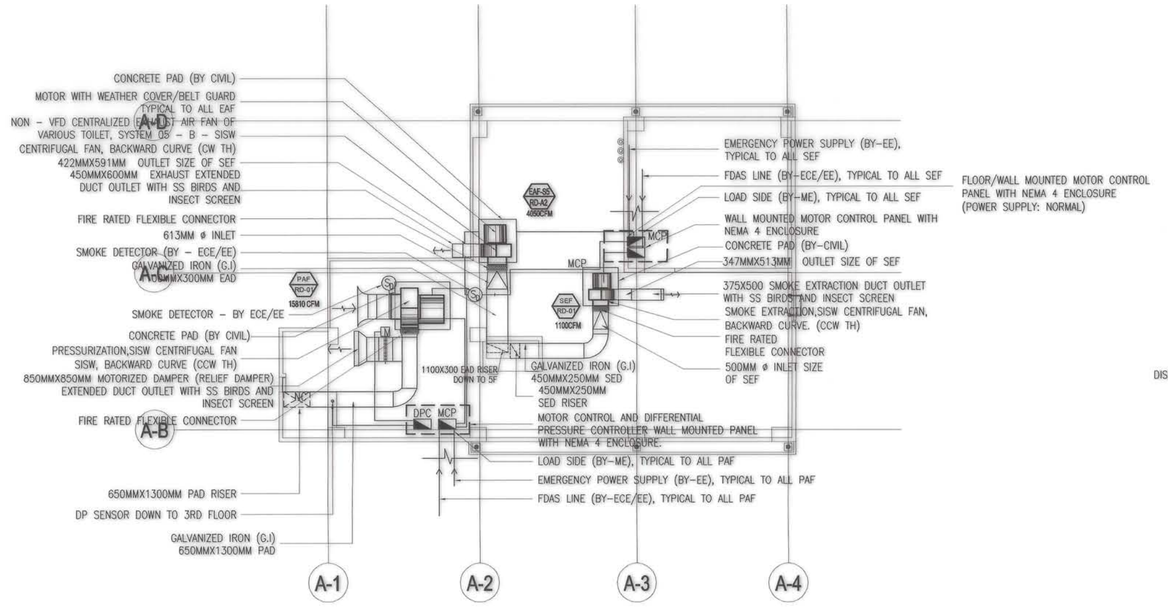
BUILDING "B" FIFTH FLOOR VENTILATION LAYOUT PLAN
1 ME SCALE: 1:150M

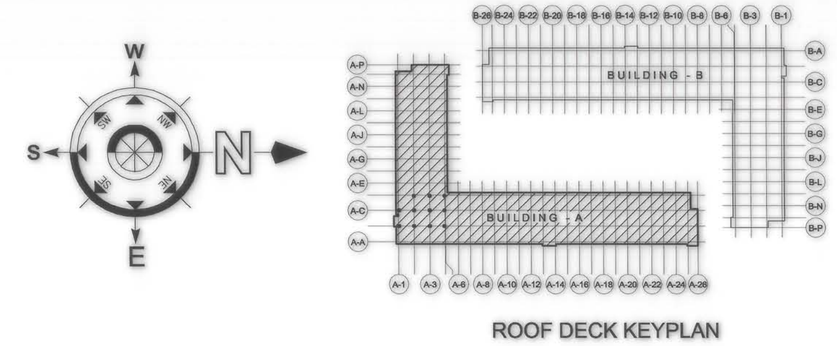
FRESH AIR GRILLE CONNECTION DETAIL

FIFTH FLOOR KEYPLAN

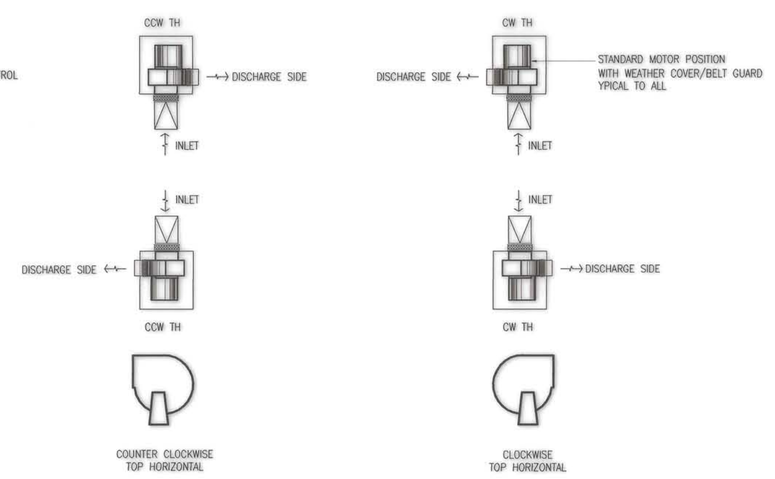
OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO ZOILO S. DELA CRUZ, VICE PRESIDENT - OPERATION REG No.: 0022557 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "B" FIFTH FLOOR VENTILATION LAYOUT PLAN	M-23







ROOF DECK KEYPLAN

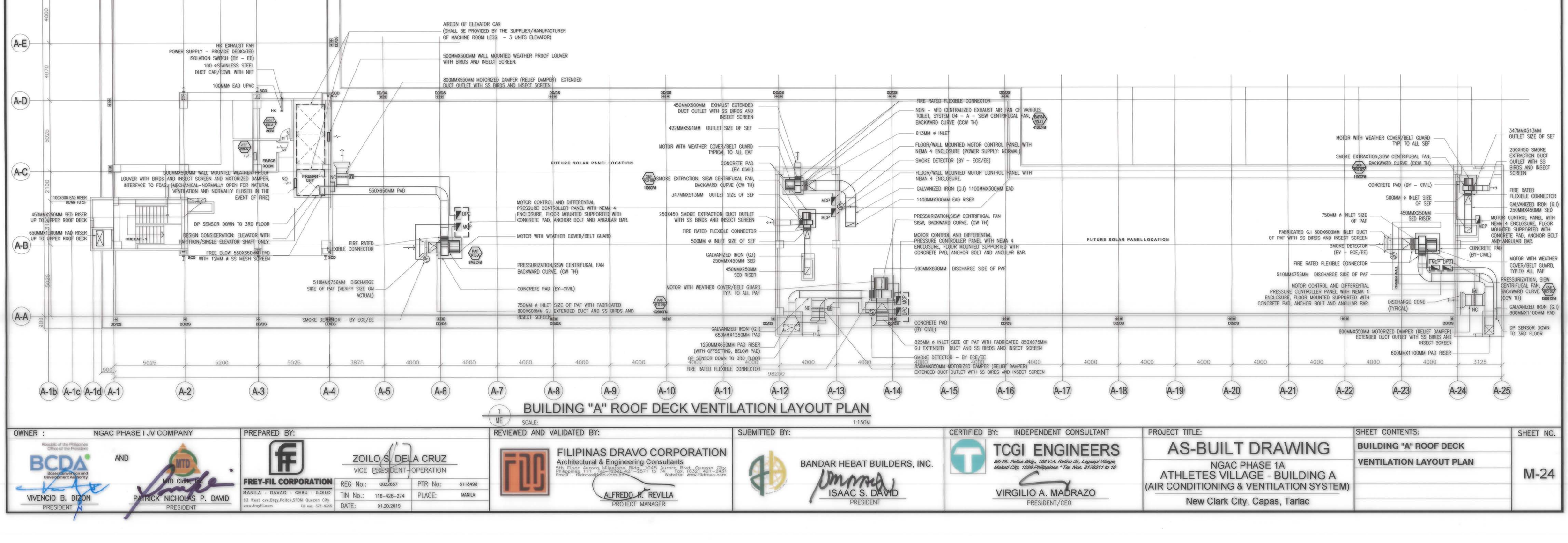


A — BUILDING "A" UPPER ROOF DECK PLAN

SCALE: 1:150M

B — SISW FAN ORIENTATIONS - FROM DRIVE SIDE (OPPOSITE OF INLET)

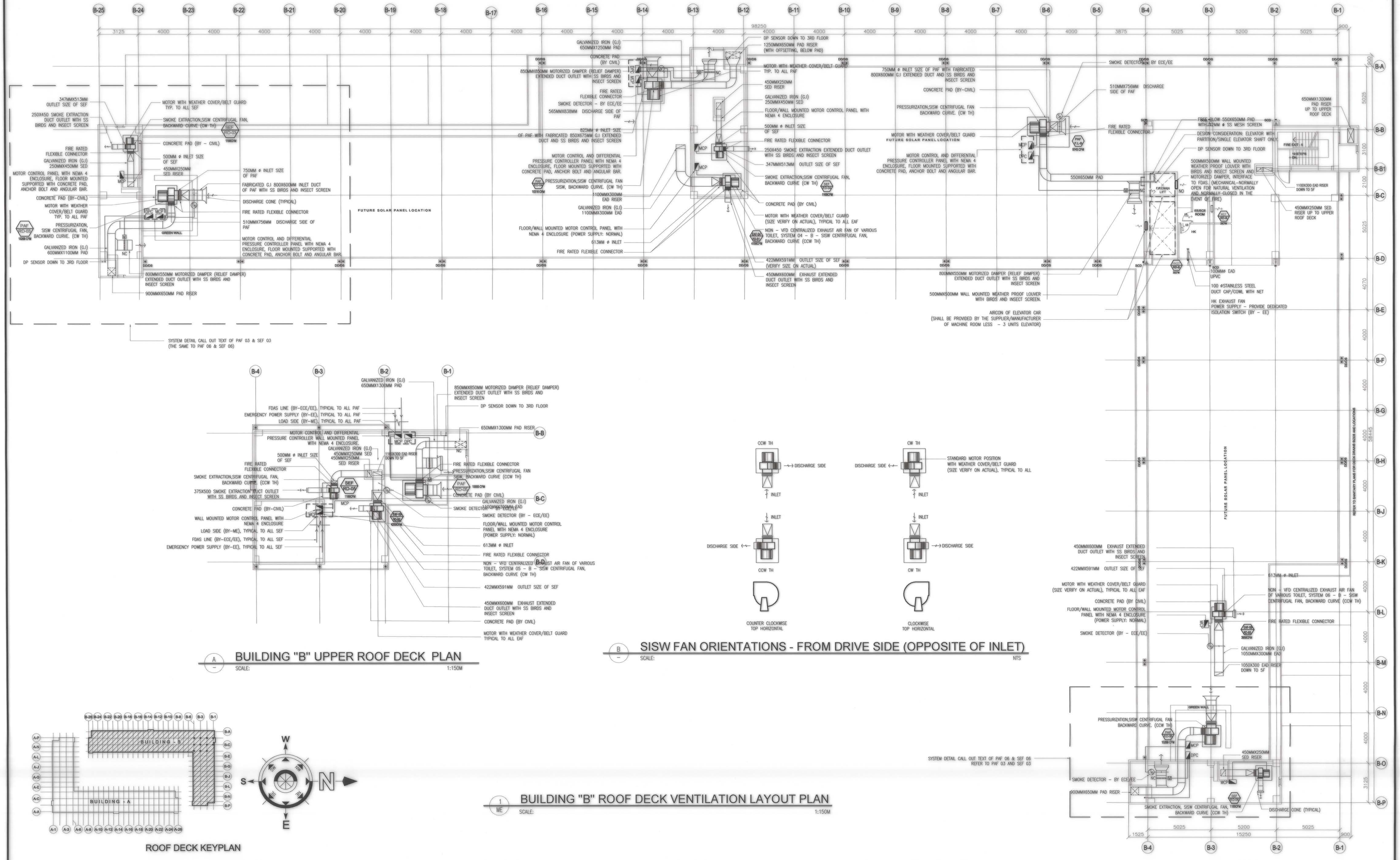
SCALE: NTS



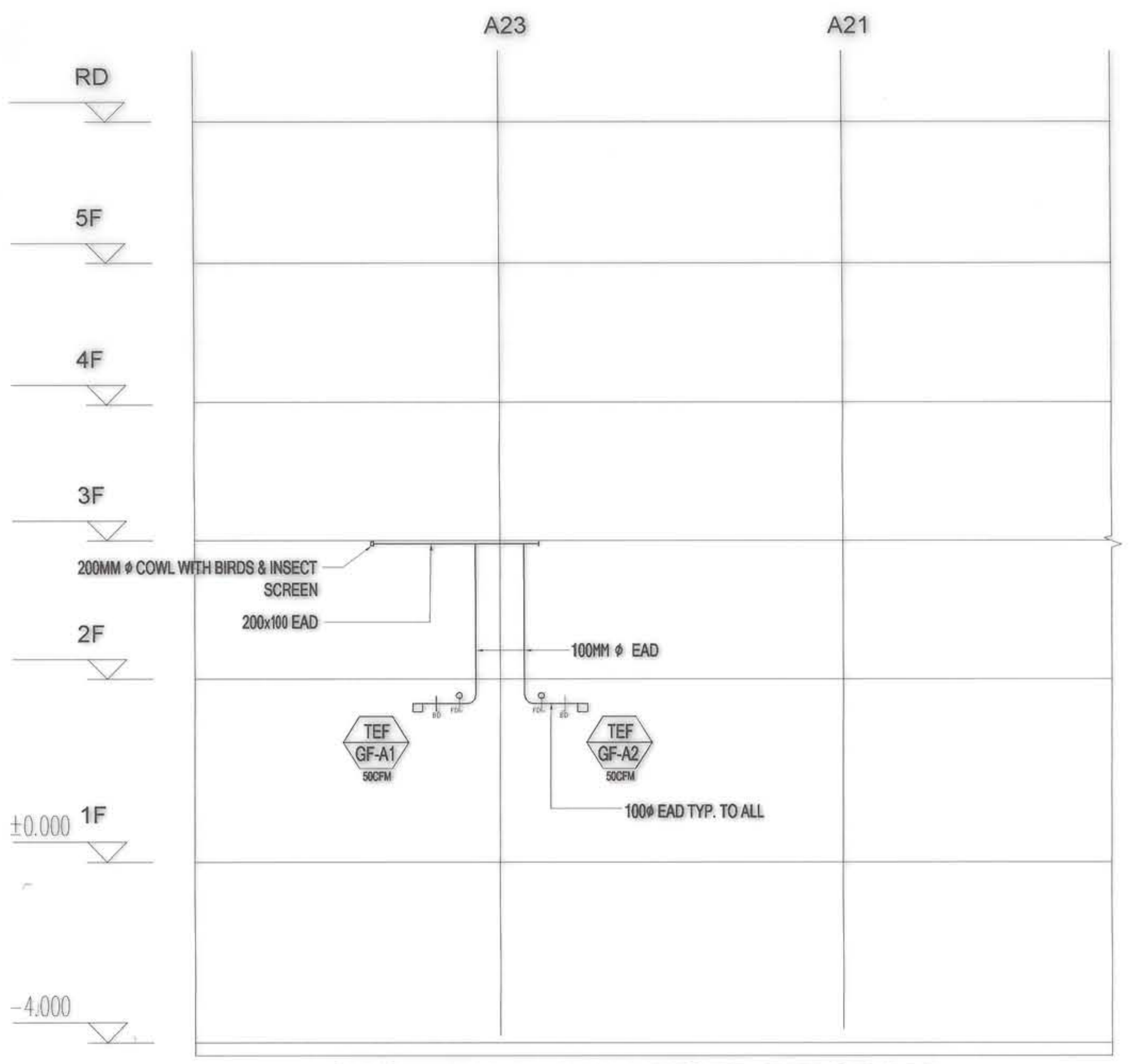
1/ME — BUILDING "A" ROOF DECK VENTILATION LAYOUT PLAN

SCALE: 1:150M

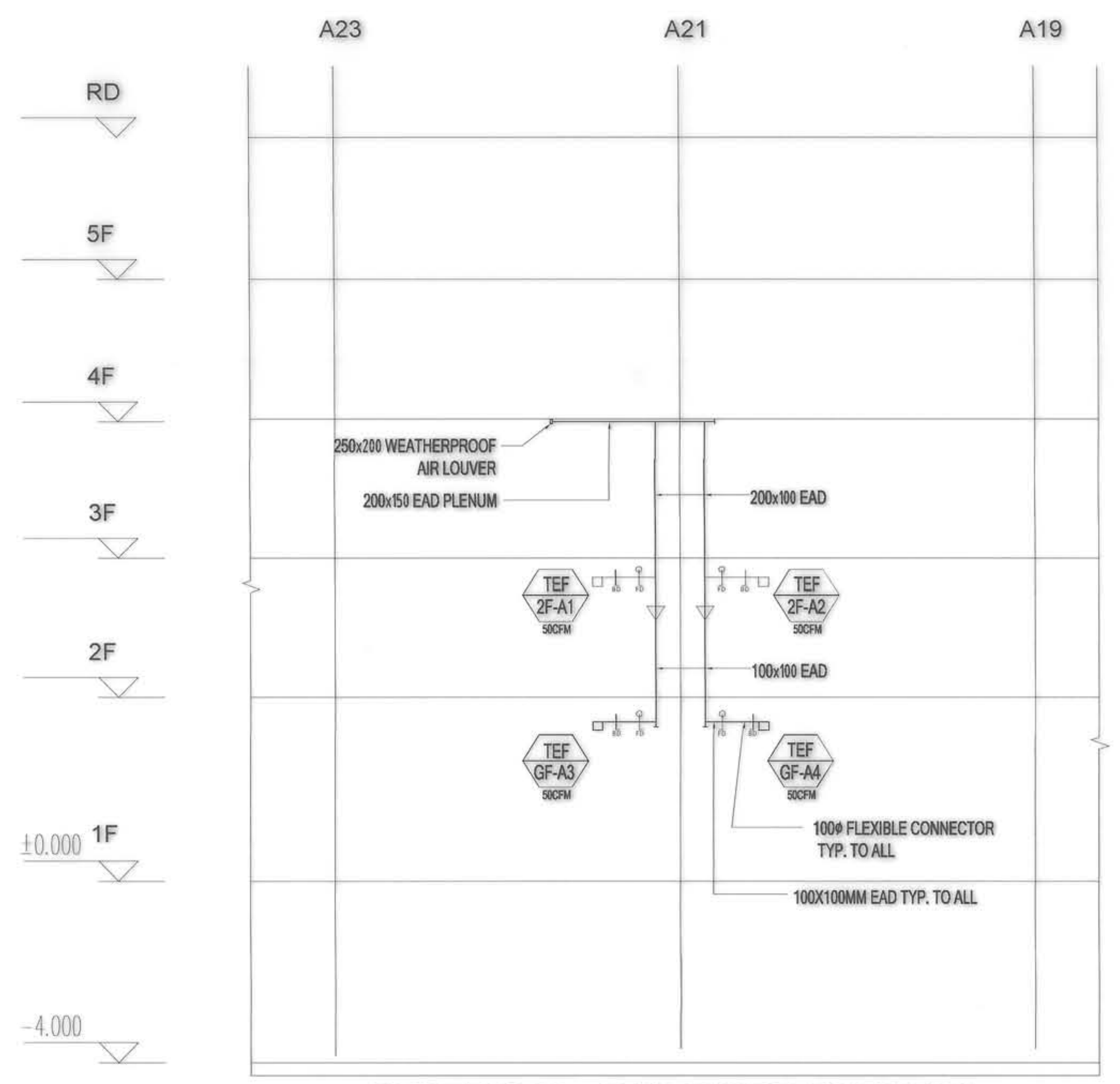
OWNER : NGAC PHASE I JV COMPANY BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON PRESIDENT AND MTD Clark PATRICK NICHOLAS P. DAVID PRESIDENT	PREPARED BY: FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West cor.Brgy.Patlok,SFDM Quezon City www.frey-fil.com tel nos. 373-4045 ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 0022657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: BUILDING "A" ROOF DECK VENTILATION LAYOUT PLAN	SHEET NO. M-24



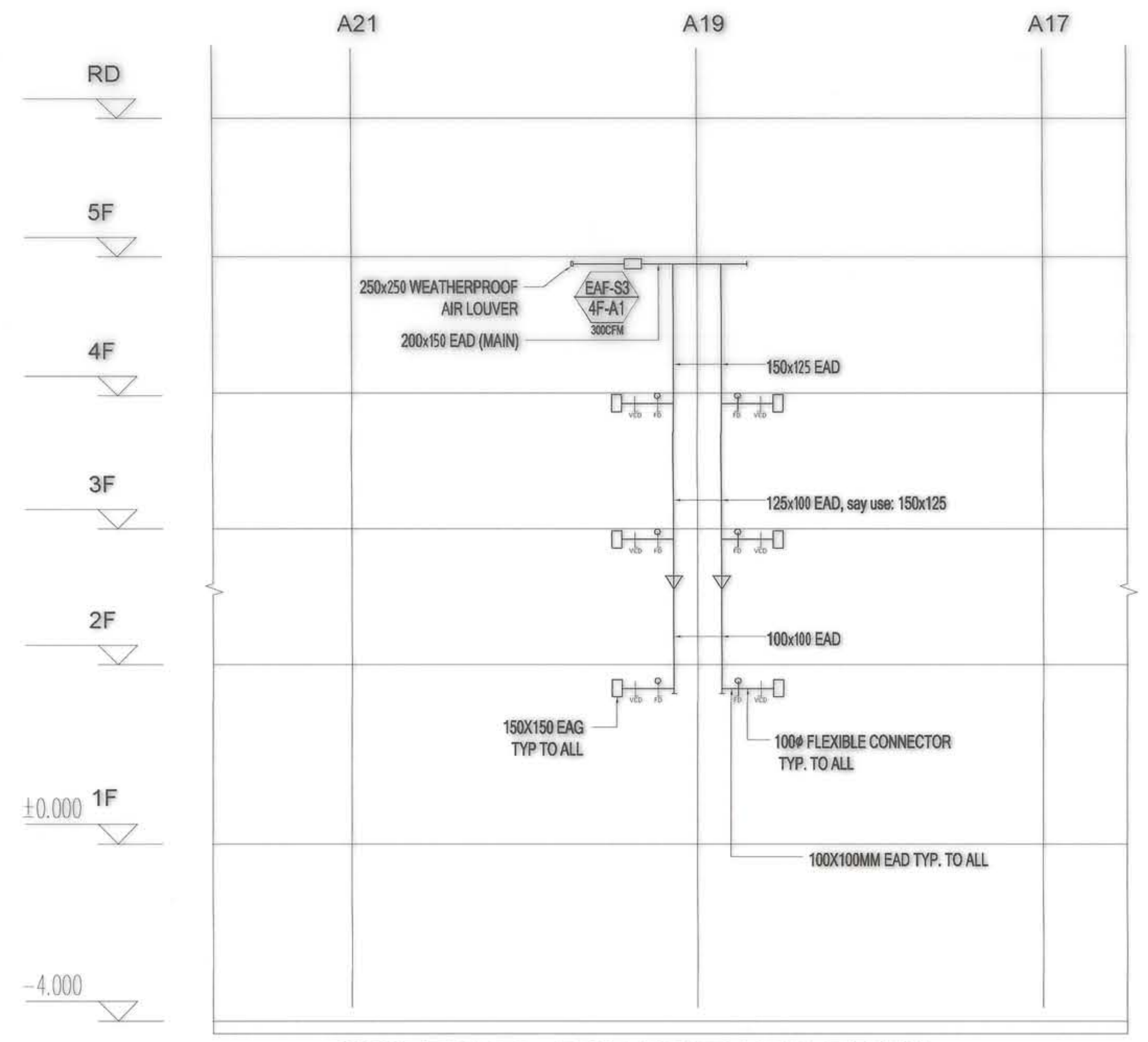
OWNER:	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
NGAC PHASE I JV COMPANY BCDA AND MTD Clark VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 002657 · PTR No: 8118498 TIN No.: 116-426-274 · PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "B" ROOF DECK VENTILATION LAYOUT PLAN	M-25



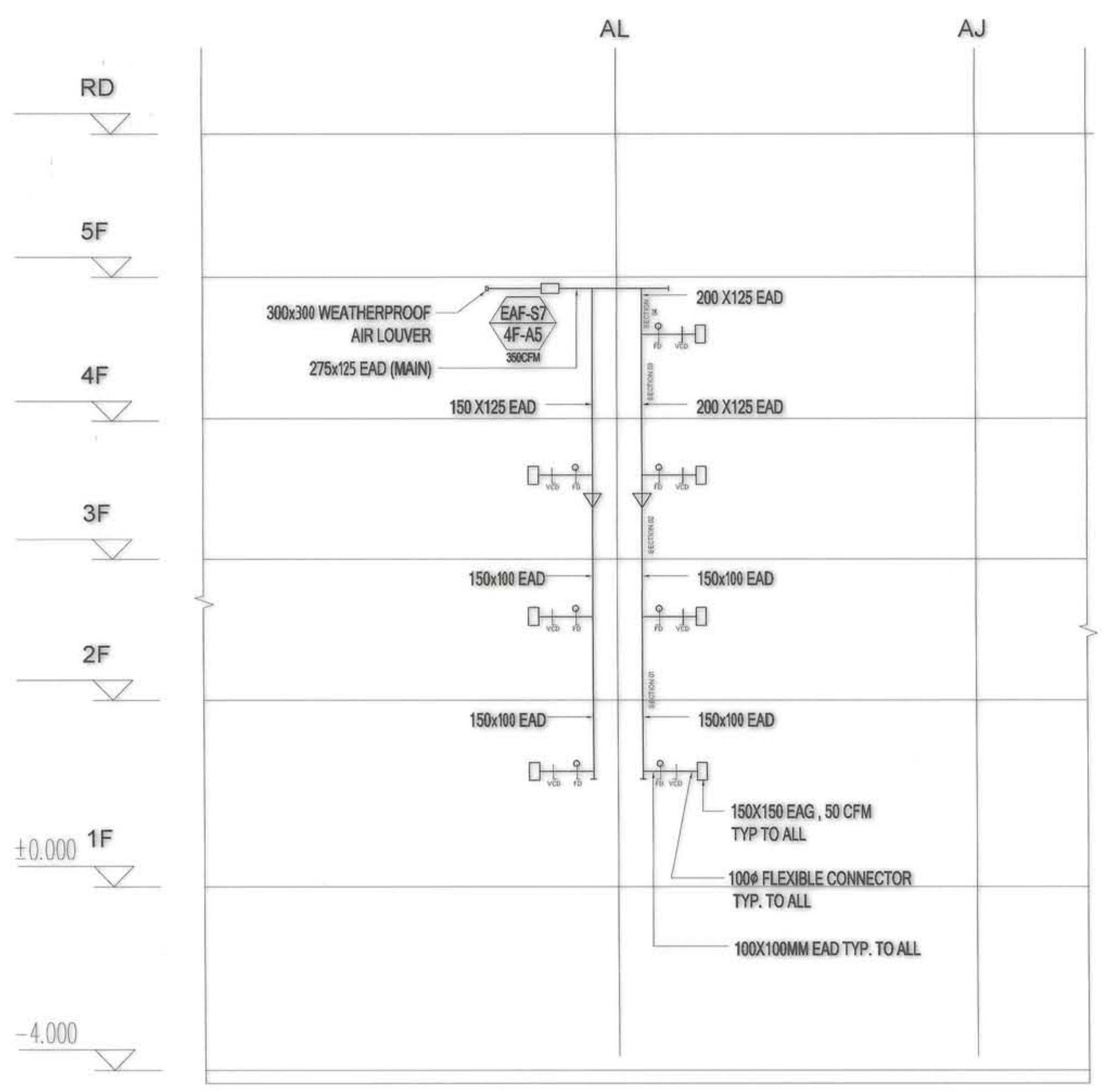
SYSTEM 01 - EAD RISER DIAGRAM
(50CFM X 2UNITS TEF)
BLD'G. A



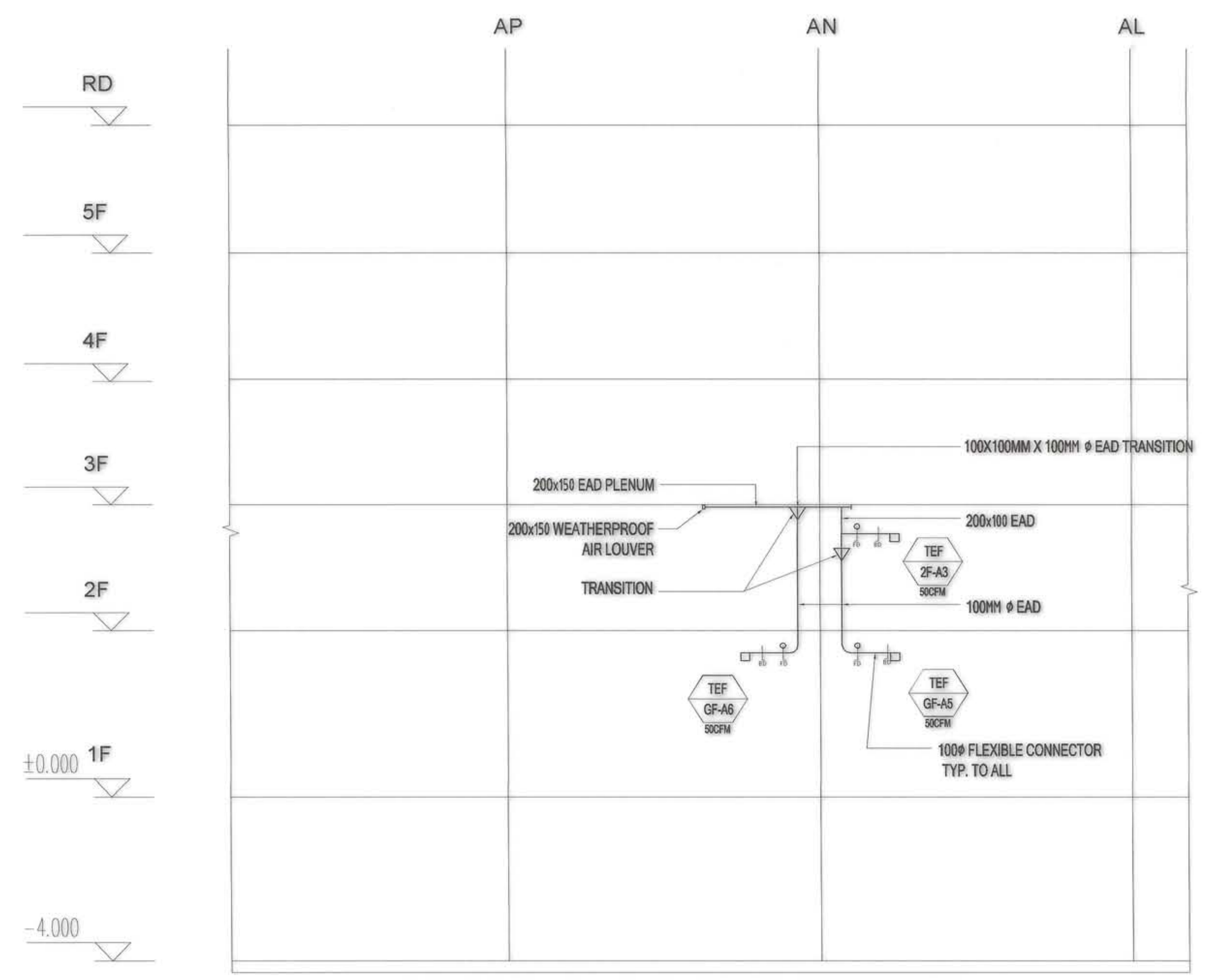
SYSTEM 02 - EAD RISER DIAGRAM
(50CFM X 4UNITS TEF)
BLD'G. A



SYSTEM 03 - EAD RISER DIAGRAM
(300CFM x 1unit EAF)
BLD'G. A



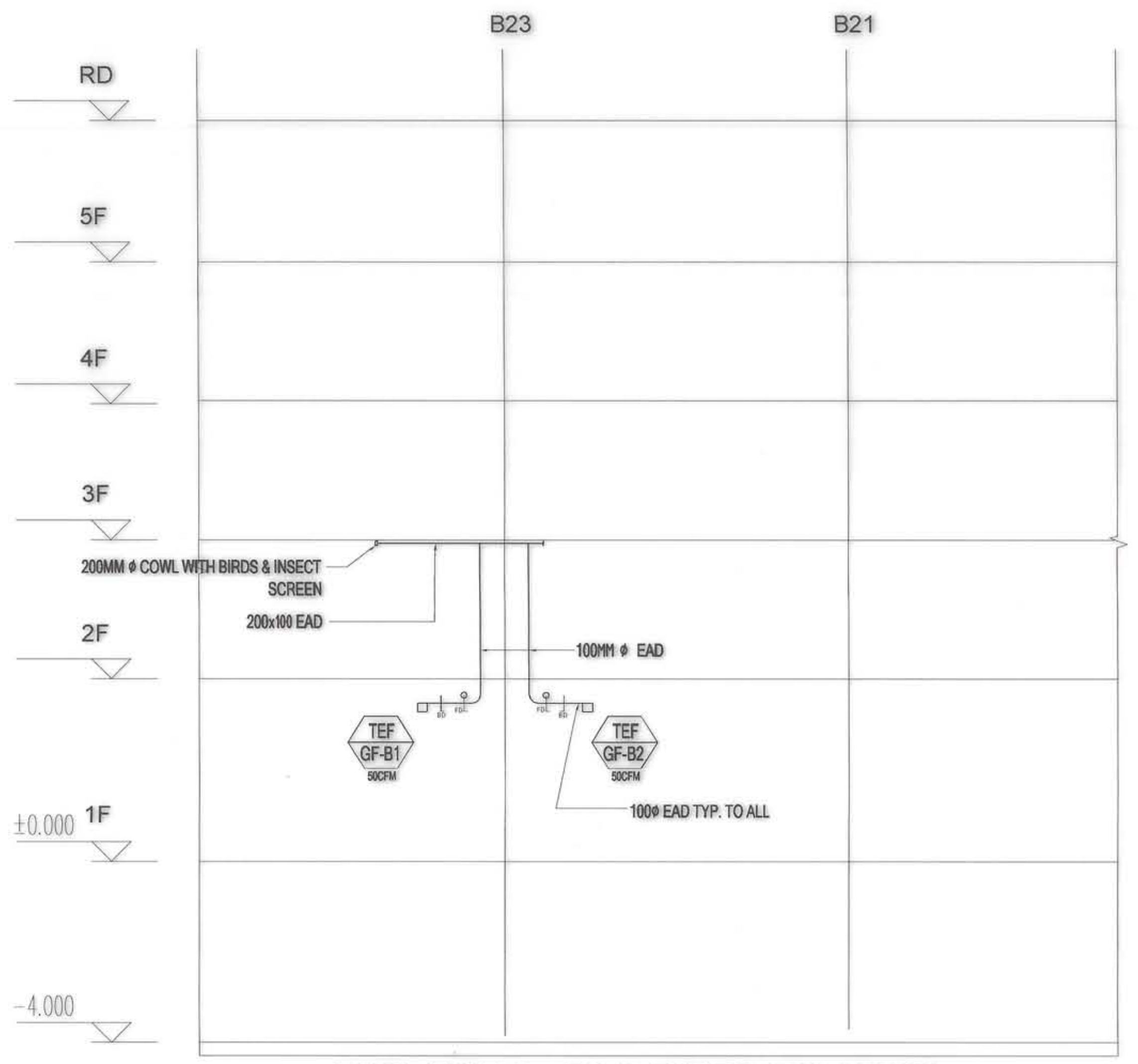
SYSTEM 07 - EAD RISER DIAGRAM
(350CFM x 1unit EAF)
BLD'G. A



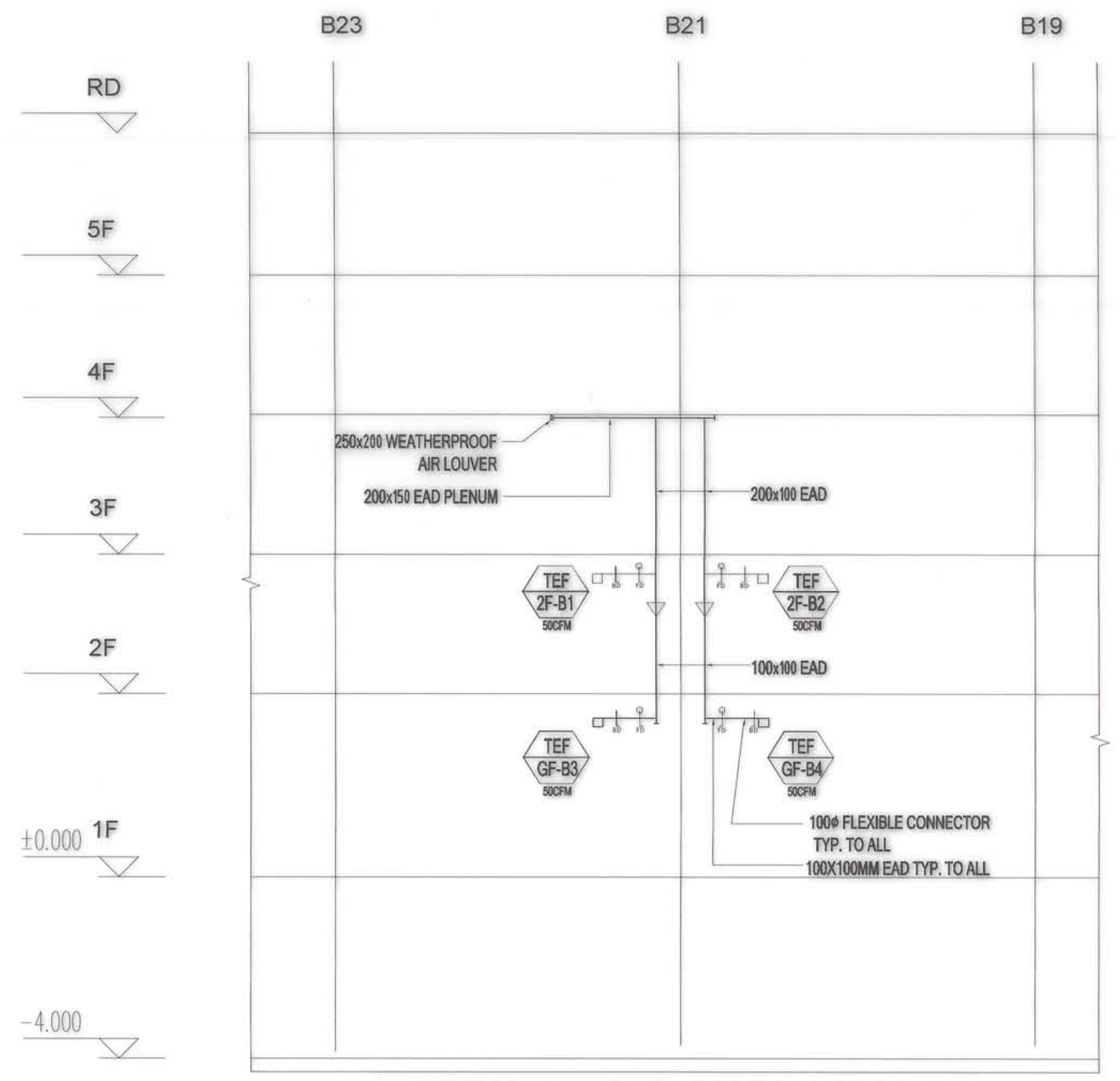
SYSTEM 08 - EAD RISER DIAGRAM
(50CFM X 3UNITS TEF)
BLD'G. A

1 / ME — VARIOUS EAD RISER DIAGRAM - BLD'G. A
SCALE: NTS

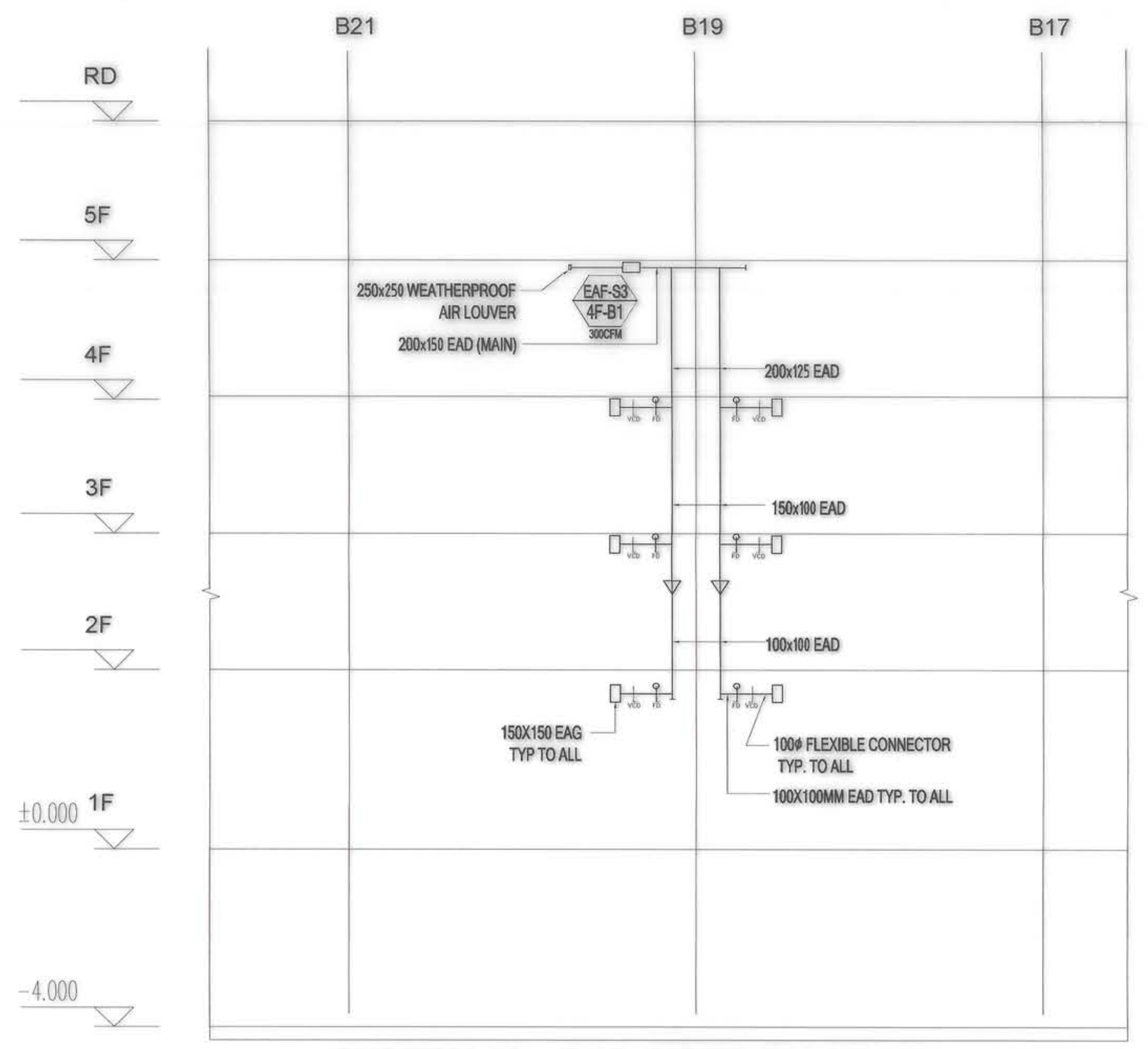
OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. — VIVENCIO B. DIZON, PRESIDENT; PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION — ZOILO S. DELA CRUZ, VICE PRESIDENT-OPERATION; REG No.: 0026657; PTR No: 8118498; TIN No.: 116-426-274; PLACE: MANILA; DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING; NGAC PHASE 1A; ATHLETES VILLAGE - BUILDING A; (AIR CONDITIONING & VENTILATION SYSTEM); New Clark City, Capas, Tarlac	BUILDING "A" VARIOUS; TOILET EAD RISER DIAGRAM	M-26



SYSTEM 01 - EAD RISER DIAGRAM (50CFM X 2UNITS TEF) BLD'G. B



SYSTEM 02 - EAD RISER DIAGRAM (50CFM X 4UNITS TEF) BLD'G. B



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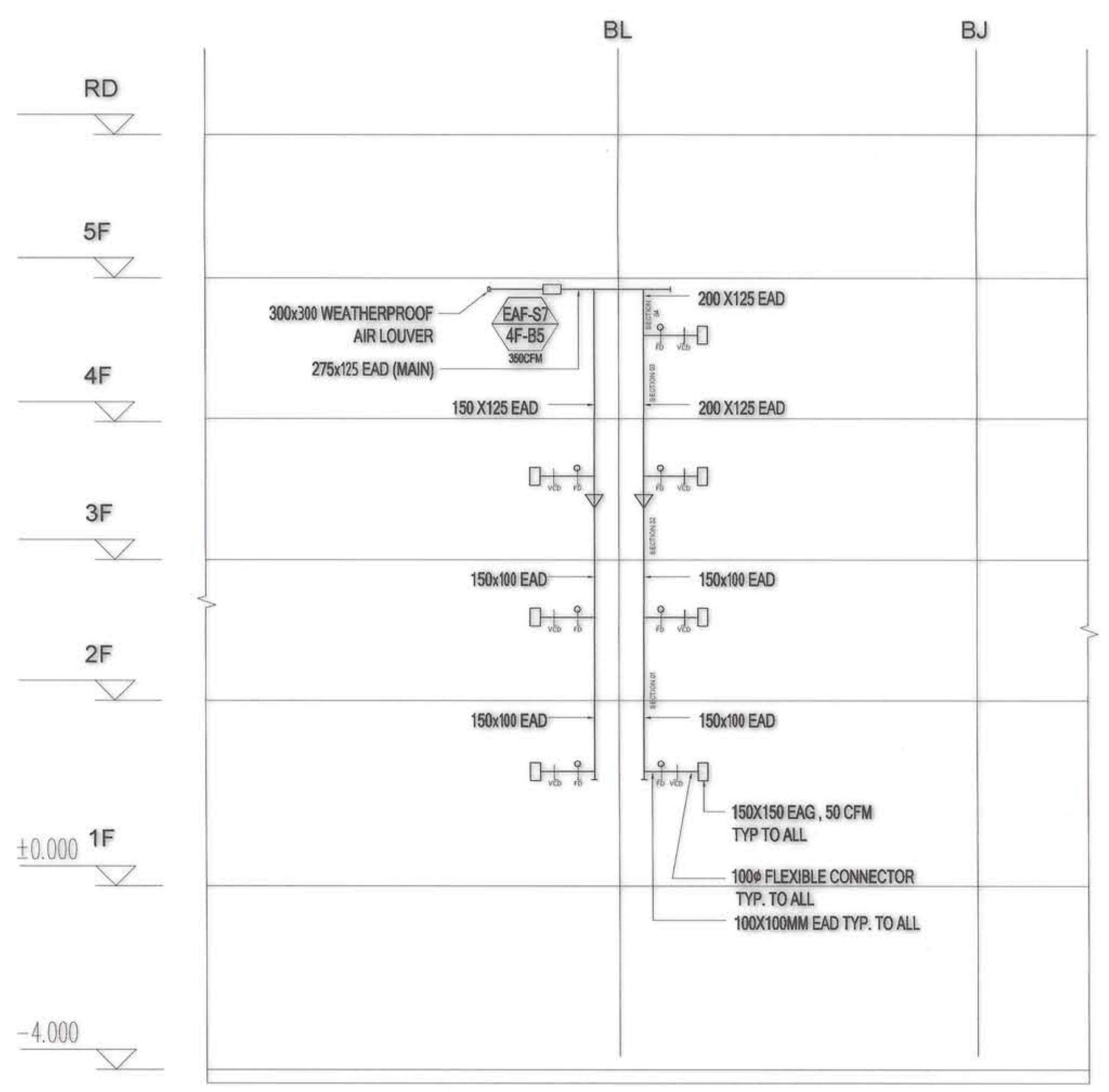

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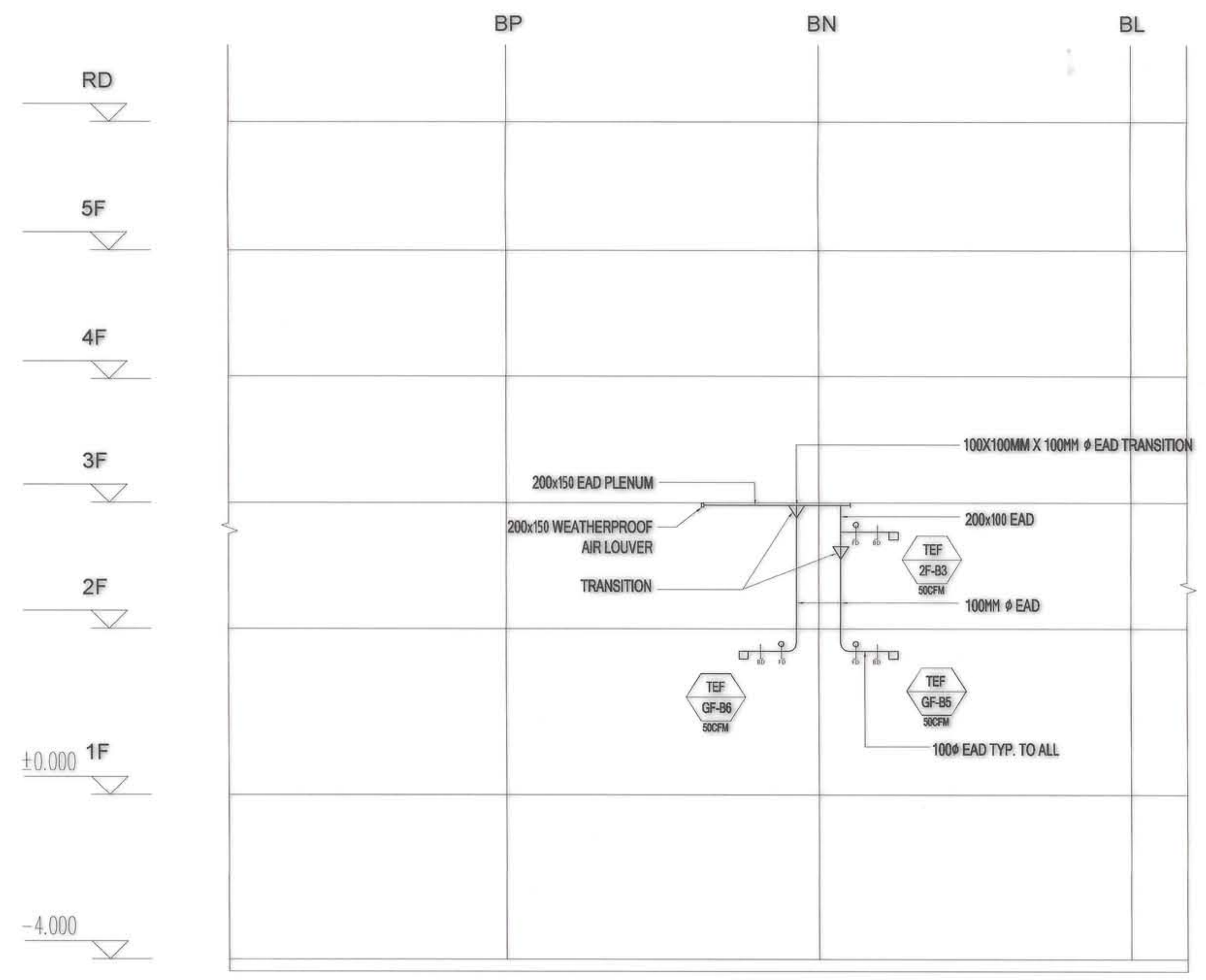
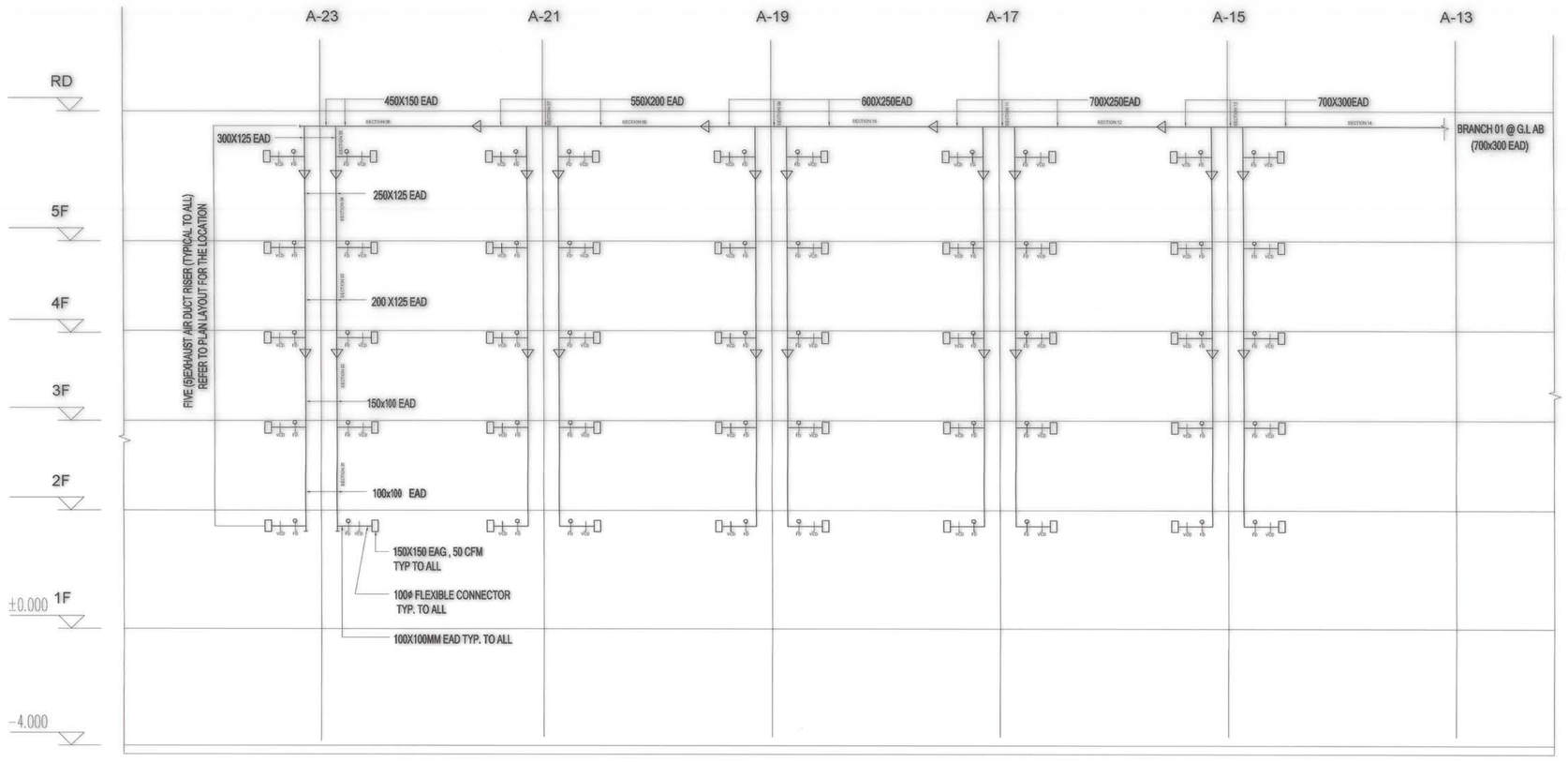


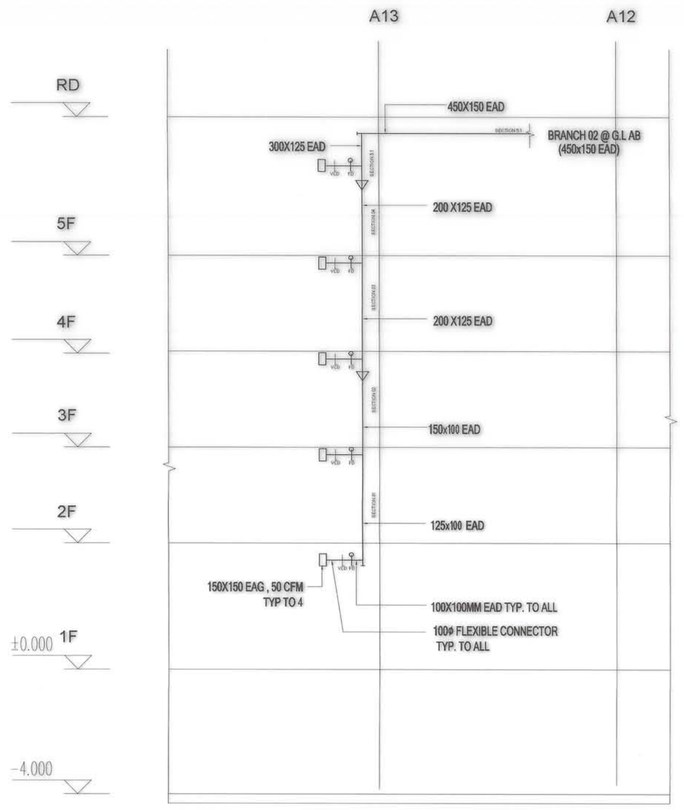
SYSTEM 08 - EAD RISER DIAGRAM (50CFM X 3UNITS TEF) BLD'G. B

1 ME VARIOUS EAD RISER DIAGRAM - BLD'G. B
SCALE: NTS

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD VIVENCIO B. DIZON PRESIDENT; PATRICK NICHOLAS P. DAVID PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO; ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION; REG No.: 002657; PTR No: 8118498; TIN No.: 116-426-274; PLACE: MANILA; DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants; ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS; VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BUILDING "B" VARIOUS; TOILET EAD RISER DIAGRAM	M-27



SYSTEM 04 - EAD RISER DIAGRAM
BRANCH 01 - 2,500 CFM
BLD'G. A



SYSTEM 04 - EAD RISER DIAGRAM
BRANCH 02 - 250 CFM
BLD'G. A

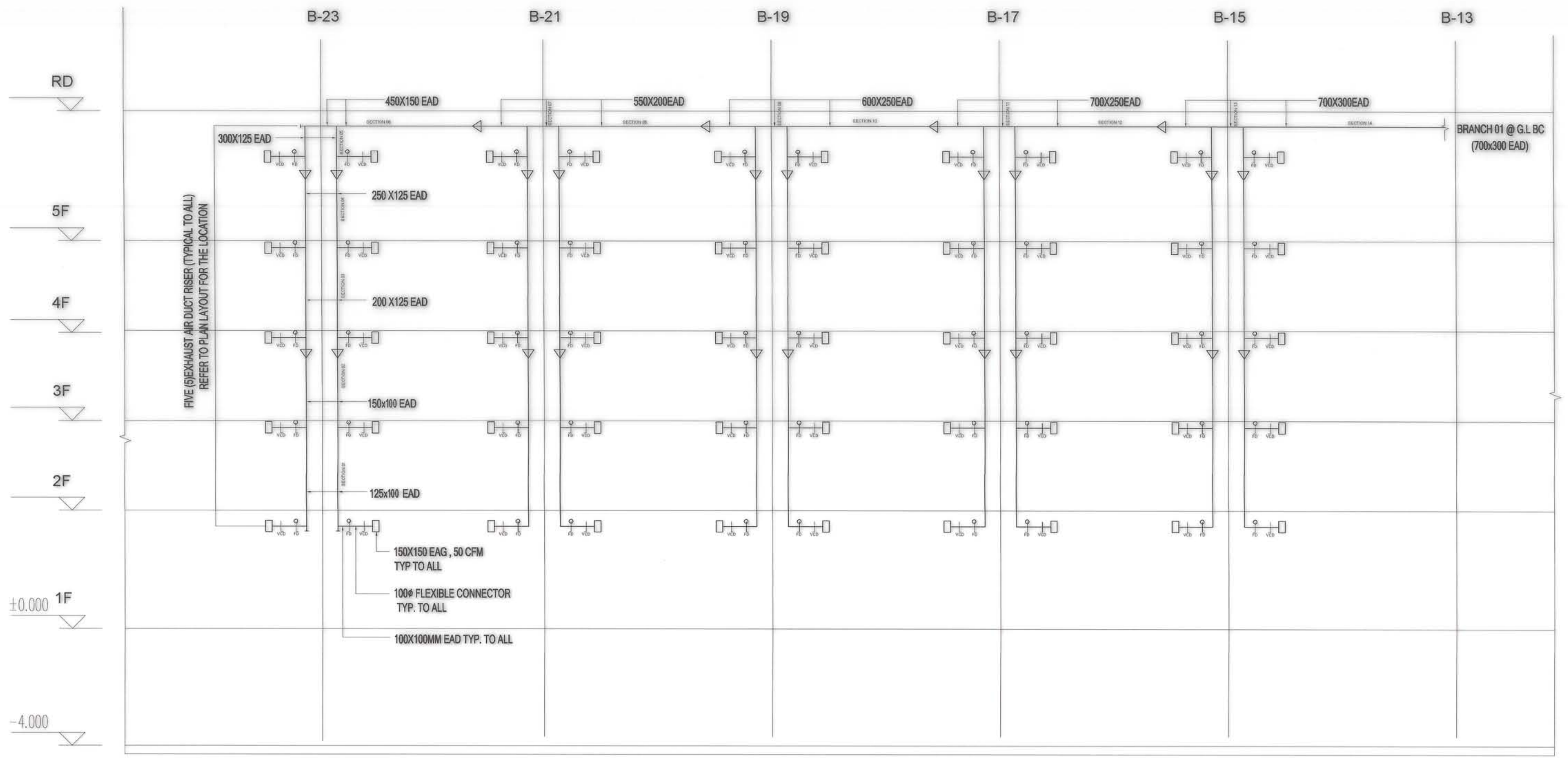
SYSTEM 04 - EAD RISER DIAGRAM
BRANCH 03 - 900.0 CFM
BLD'G. A

SYSTEM 04 - EAD RISER DIAGRAM
BRANCH 04 - 500 CFM
BLD'G. A

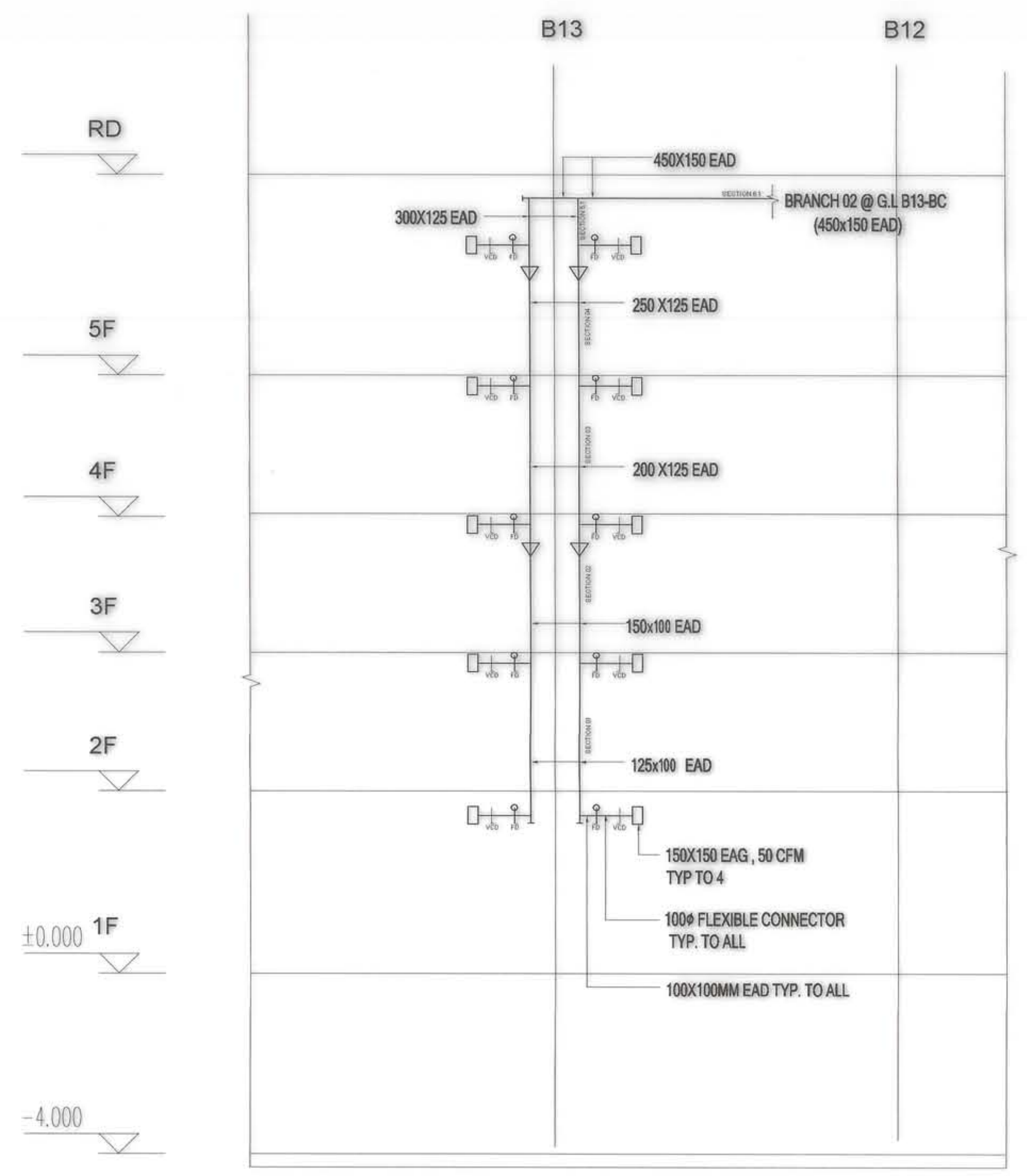
SYSTEM 04 - MAIN DUCT INTERCONNECTIONS OF BRANCHES
MAIN - 4,150.0 CFM
BLD'G. A

1 ME VARIOUS EAD RISER DIAGRAM - BLD'G. A
SCALE: NTS

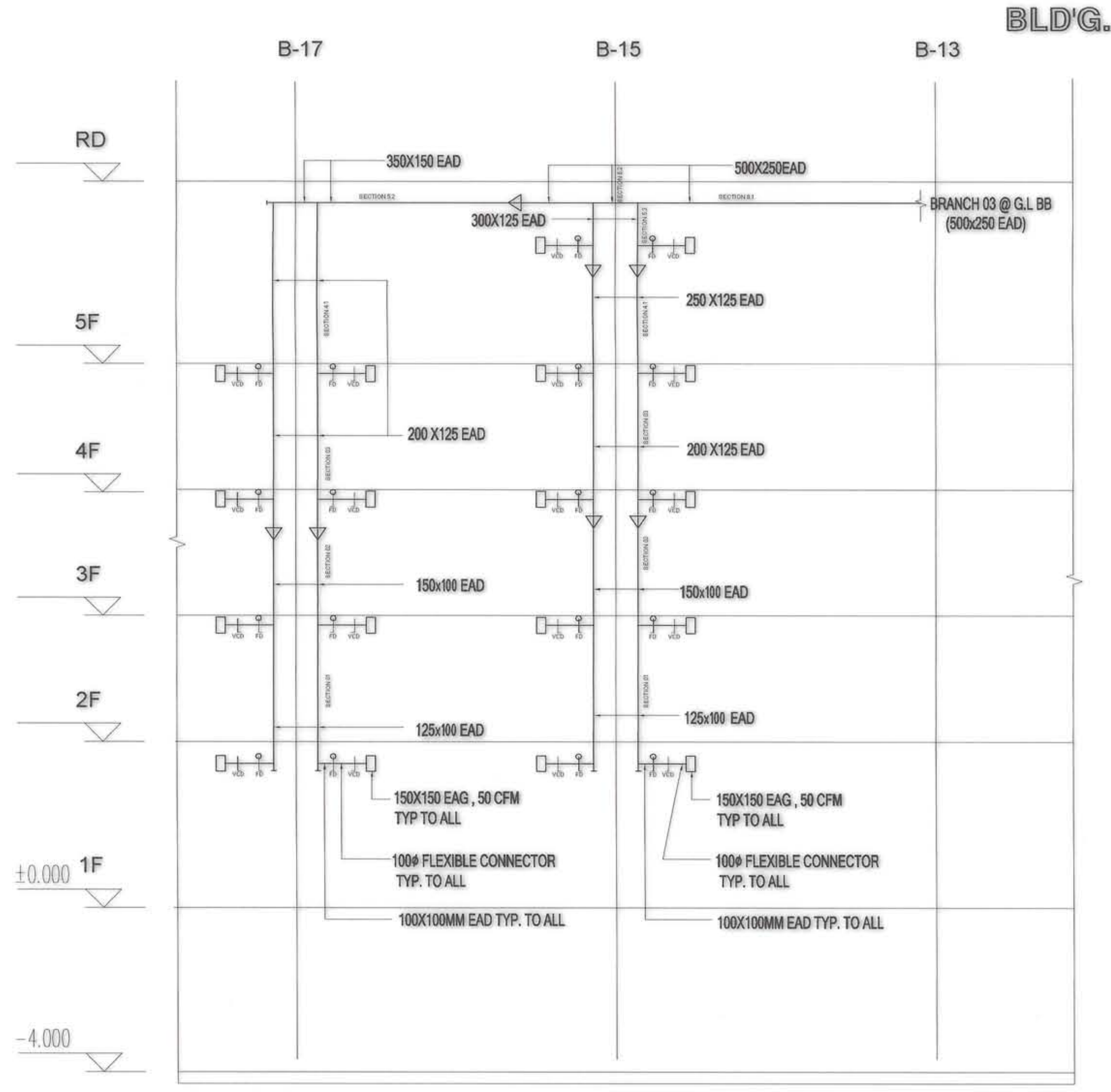
OWNER : NGAC PHASE I JV COMPANY BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON PRESIDENT AND MTD Clark Inc. PATRICK NICHOLAS P. DAVID PRESIDENT	PREPARED BY: FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com tel nos. 373-8365 ZOILO S. DELA CRUZ VICE PRESIDENT - OPERATION REG No.: 0022657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants 5th Floor Aurora Milestone Bldg. 1645 Aurora Blvd. Quezon City Philippines Tel. Nos. (632) 421 - 2571 to 74 Fax. (632) 421 - 2431 Email : fdc@pacific.com.ph Website: www.fildravo.com ALFREDO R. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS 9th Flr. Feliza Bldg., 108 V.A. Rufino St., Legaspi Village, Makati City, 1229 Philippines * Tel. Nos. 8178311 to 16 VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: BLD'G."A" SYSTEM 04 - CENTRALIZED TOILET VENTILATION EAD RISER DIAGRAM	SHEET NO. M-28



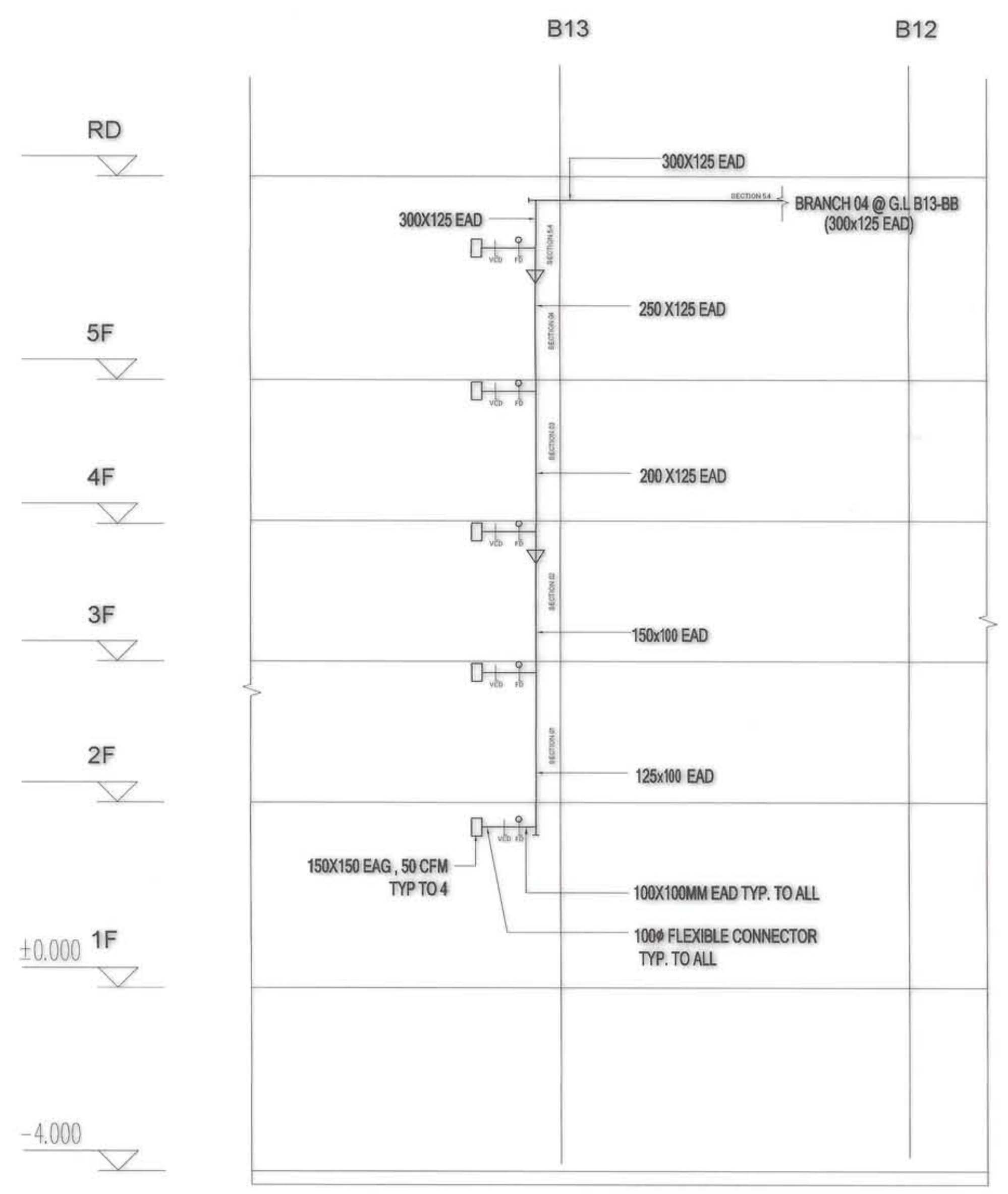
SYSTEM 04 - EAD RISER DIAGRAM
BRANCH 01 - 2,500 CFM
BLD'G. B



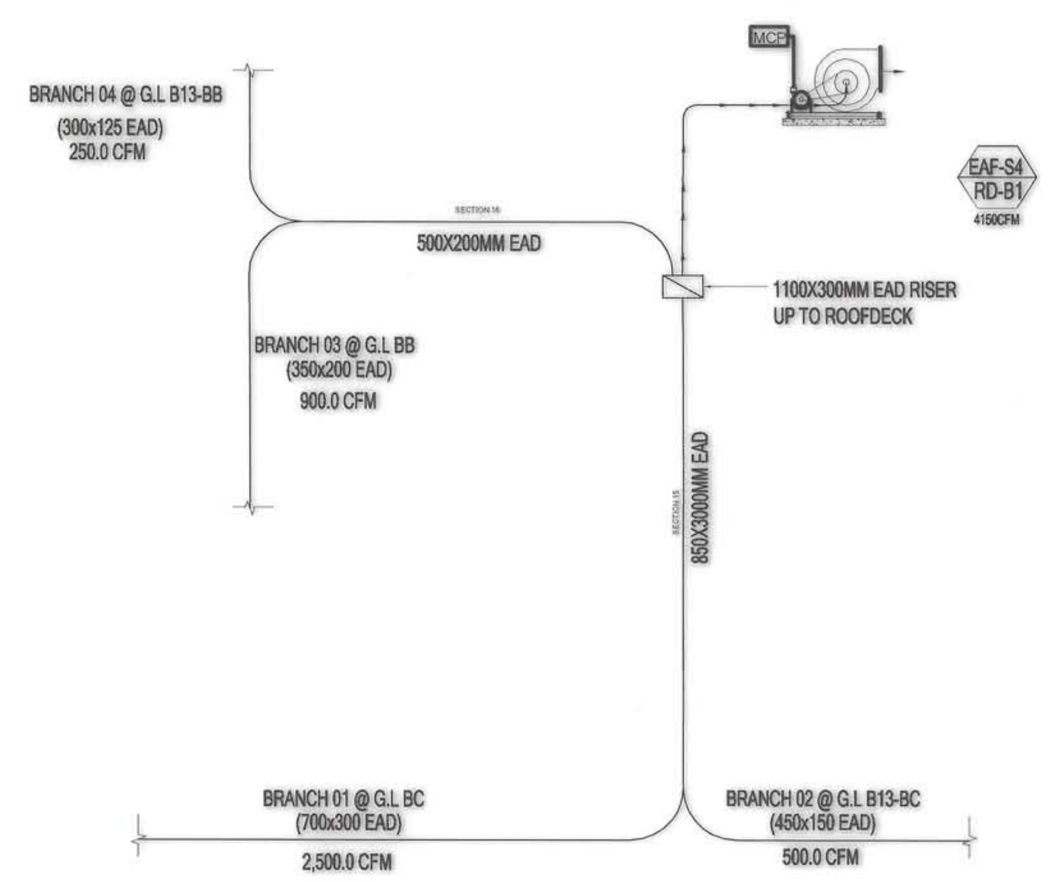
SYSTEM 04 - EAD RISER DIAGRAM
BRANCH 02 - 500 CFM
BLD'G. B



SYSTEM 04 - EAD RISER DIAGRAM
BRANCH 03 - 900.0 CFM
BLD'G. B



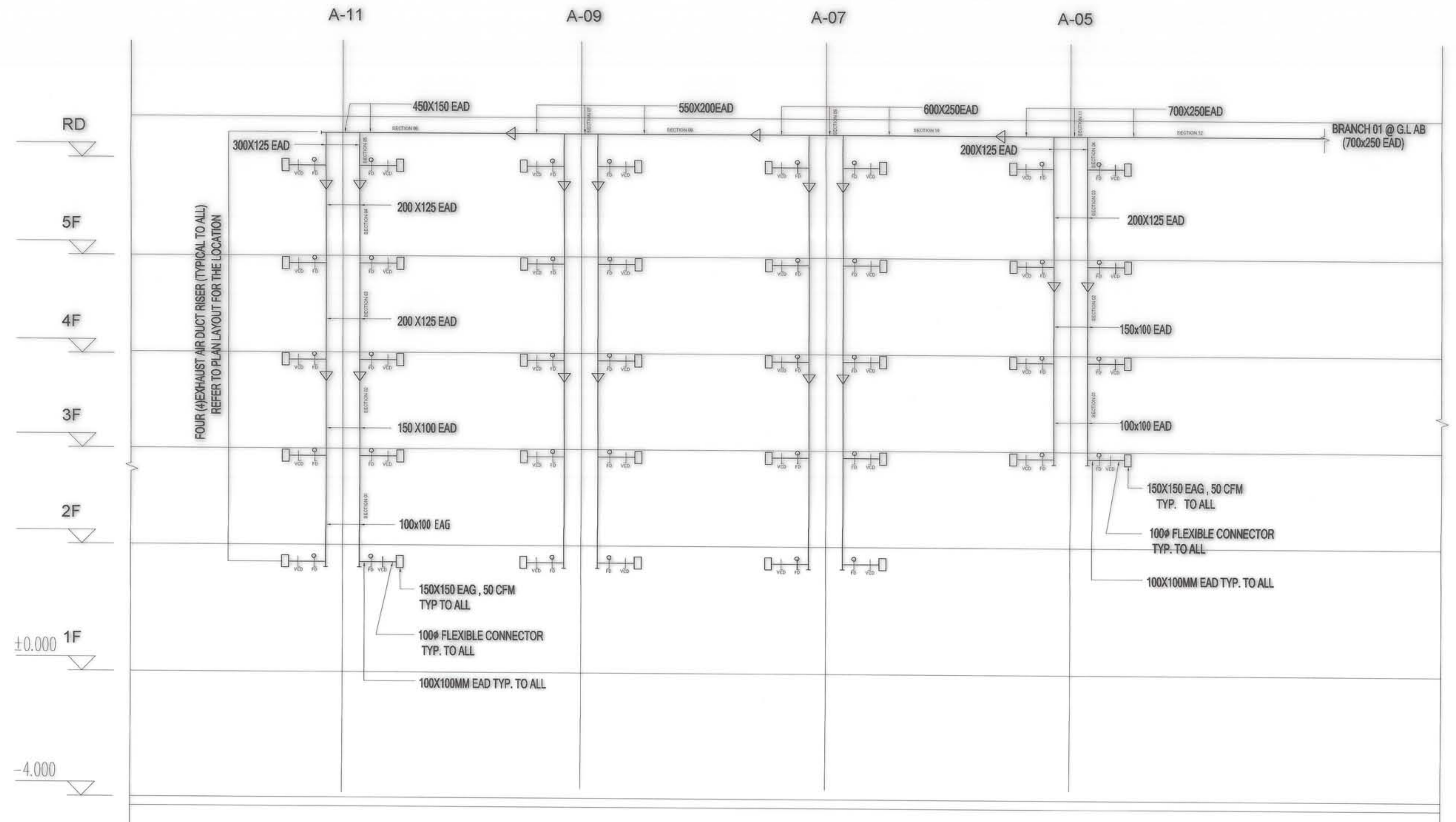
SYSTEM 04 - EAD RISER DIAGRAM
BRANCH 04 - 250 CFM
BLD'G. B



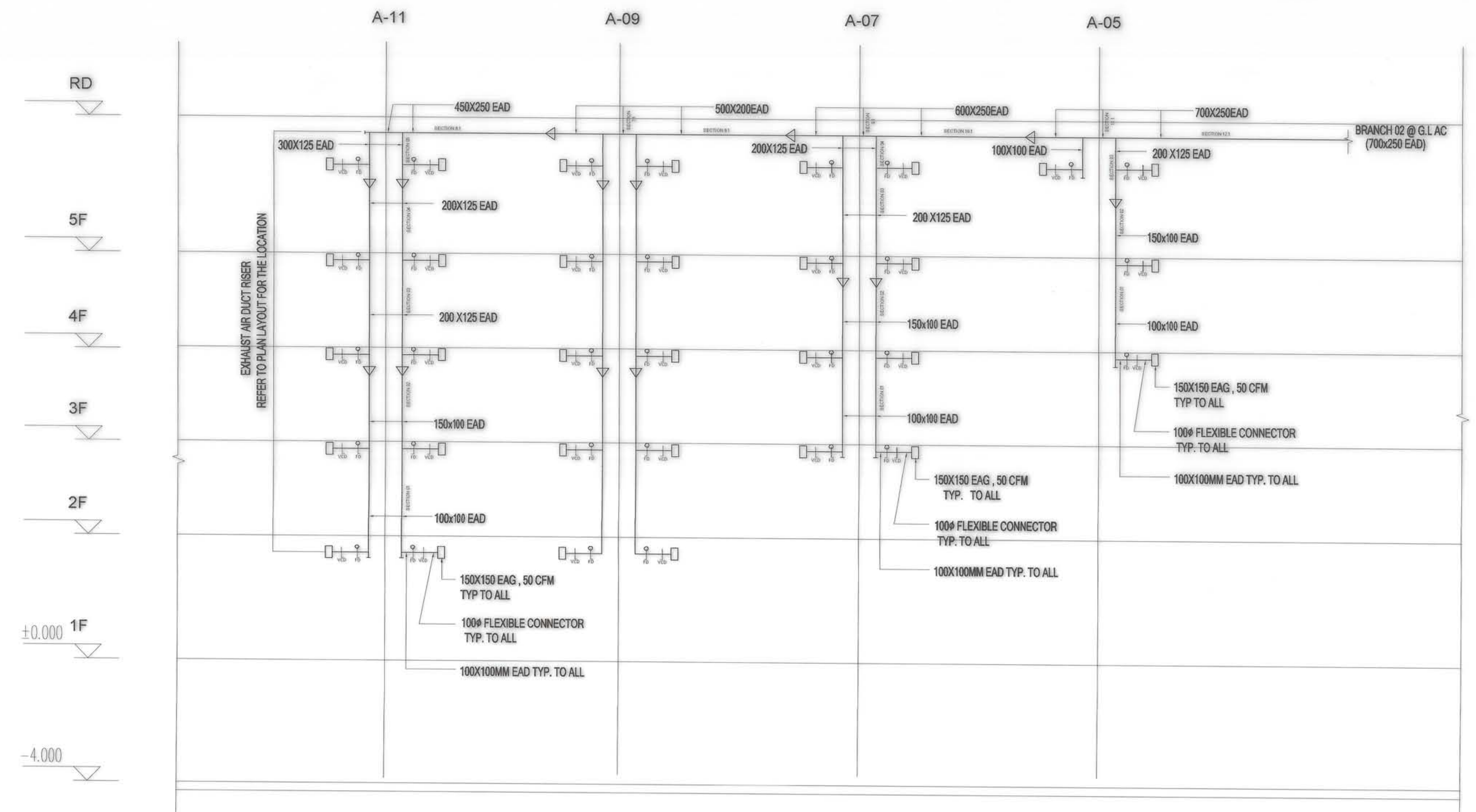
SYSTEM 04 - MAIN DUCT INTERCONNECTIONS OF BRANCHES
MAIN - 4,150.0 CFM
BLD'G. B

1 / ME — EXHAUST AIR DUCT RISER DIAGRAM - SYSTEM 04 - BLD'G. B
SCALE: NTS

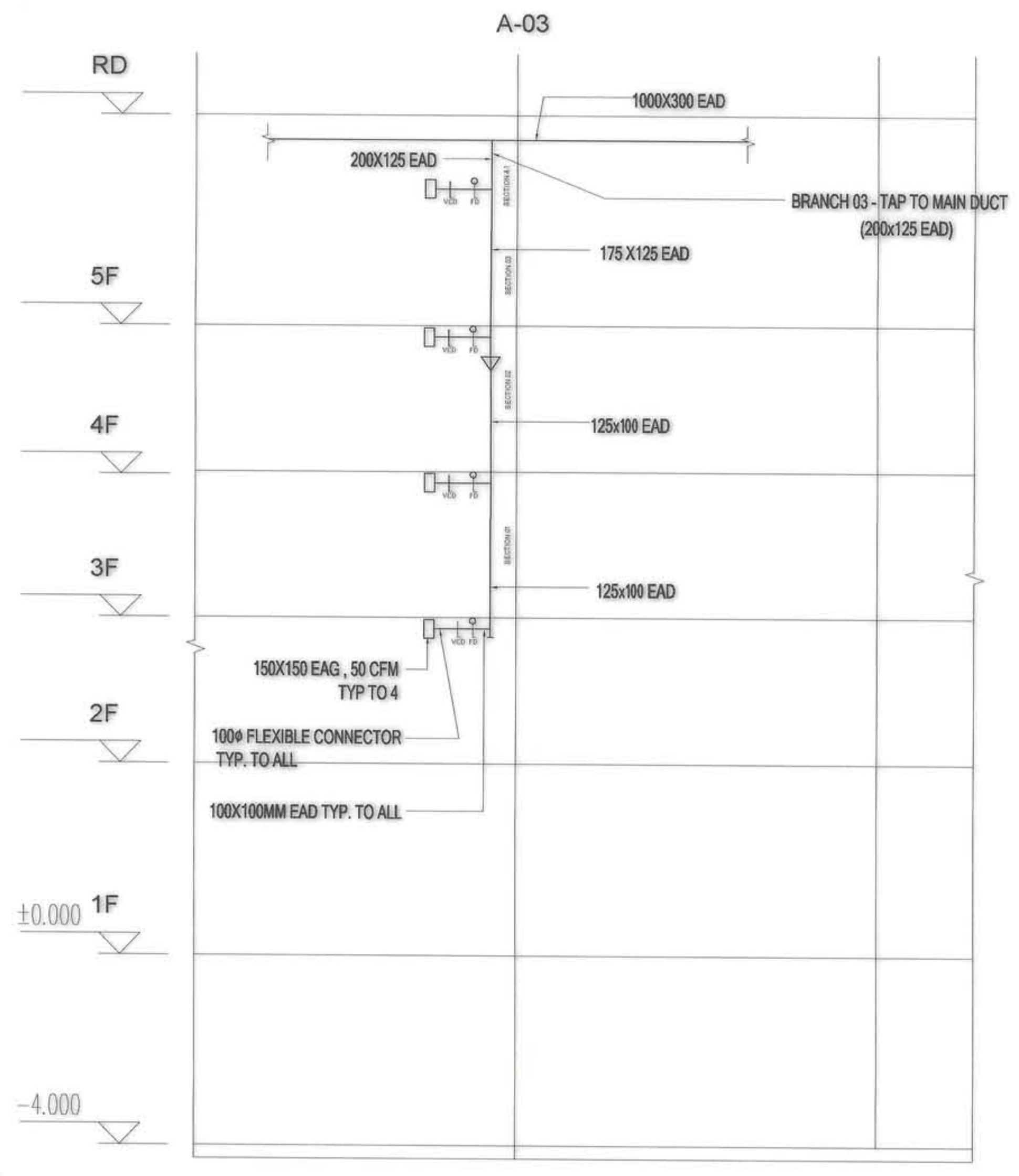
OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO ZOILO S. DELA CRUZ, VICE PRESIDENT - OPERATION REG No.: 002857 · PTR No.: 8118498 TIN No.: 116-426-274 · PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BLD'G."B" SYSTEM 04 - CENTRALIZED TOILET VENTILATION EAD RISER DIAGRAM	M-29



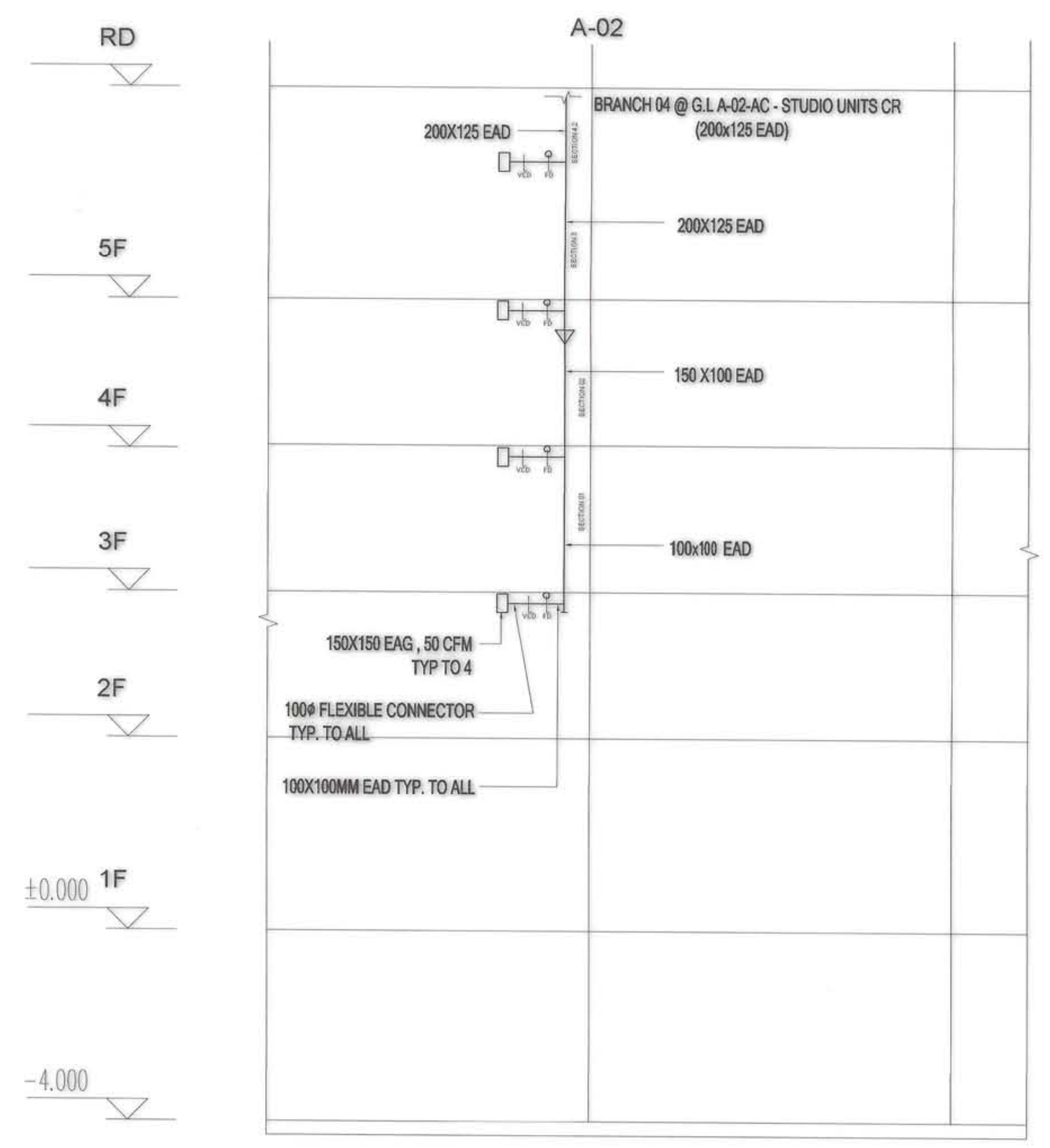
SYSTEM 05 - EAD RISER DIAGRAM
BRANCH 01 - 1,900.0 CFM
BLD'G. A



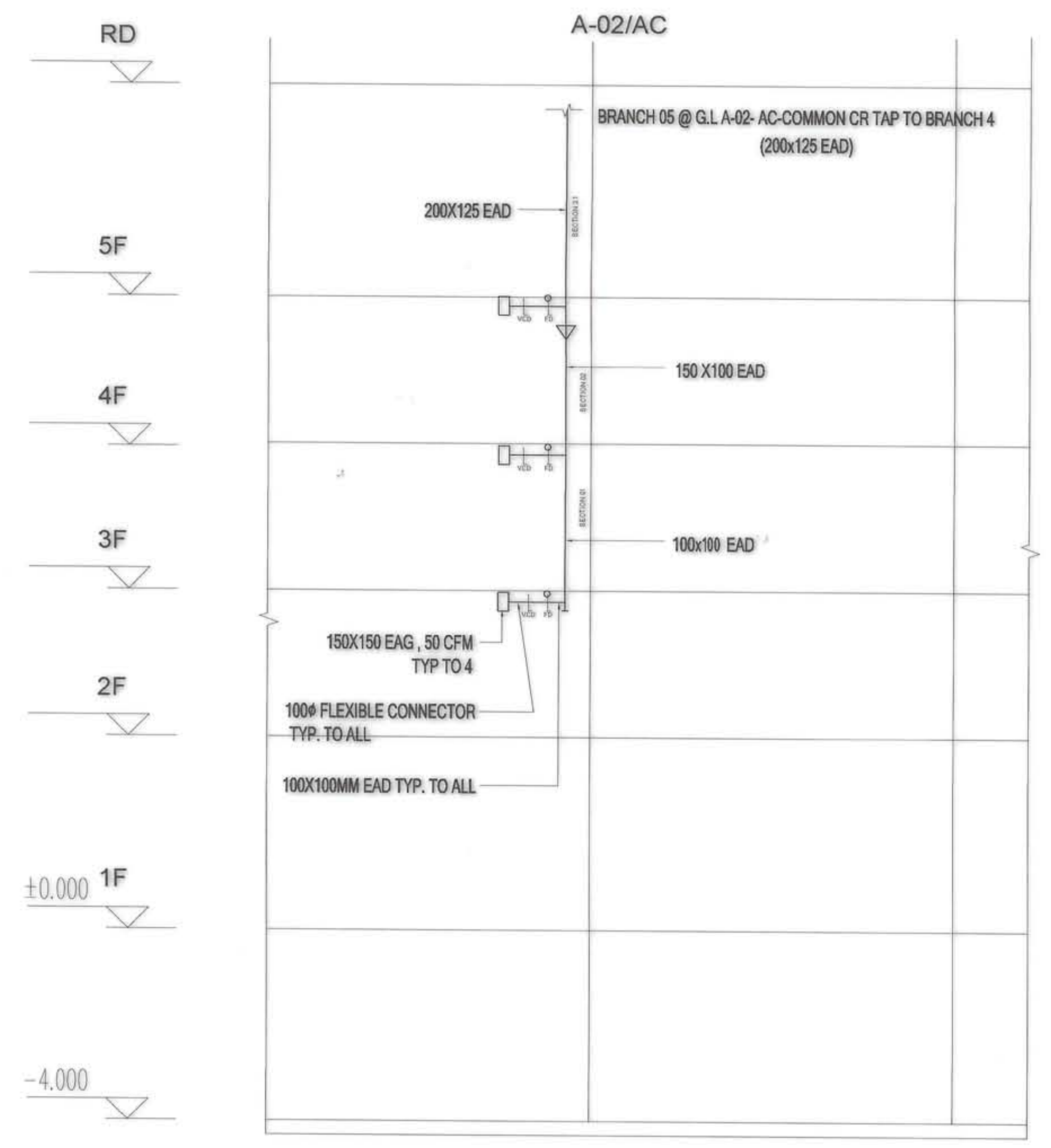
SYSTEM 05 - EAD RISER DIAGRAM
BRANCH 02 - 1,600.0 CFM
BLD'G. A



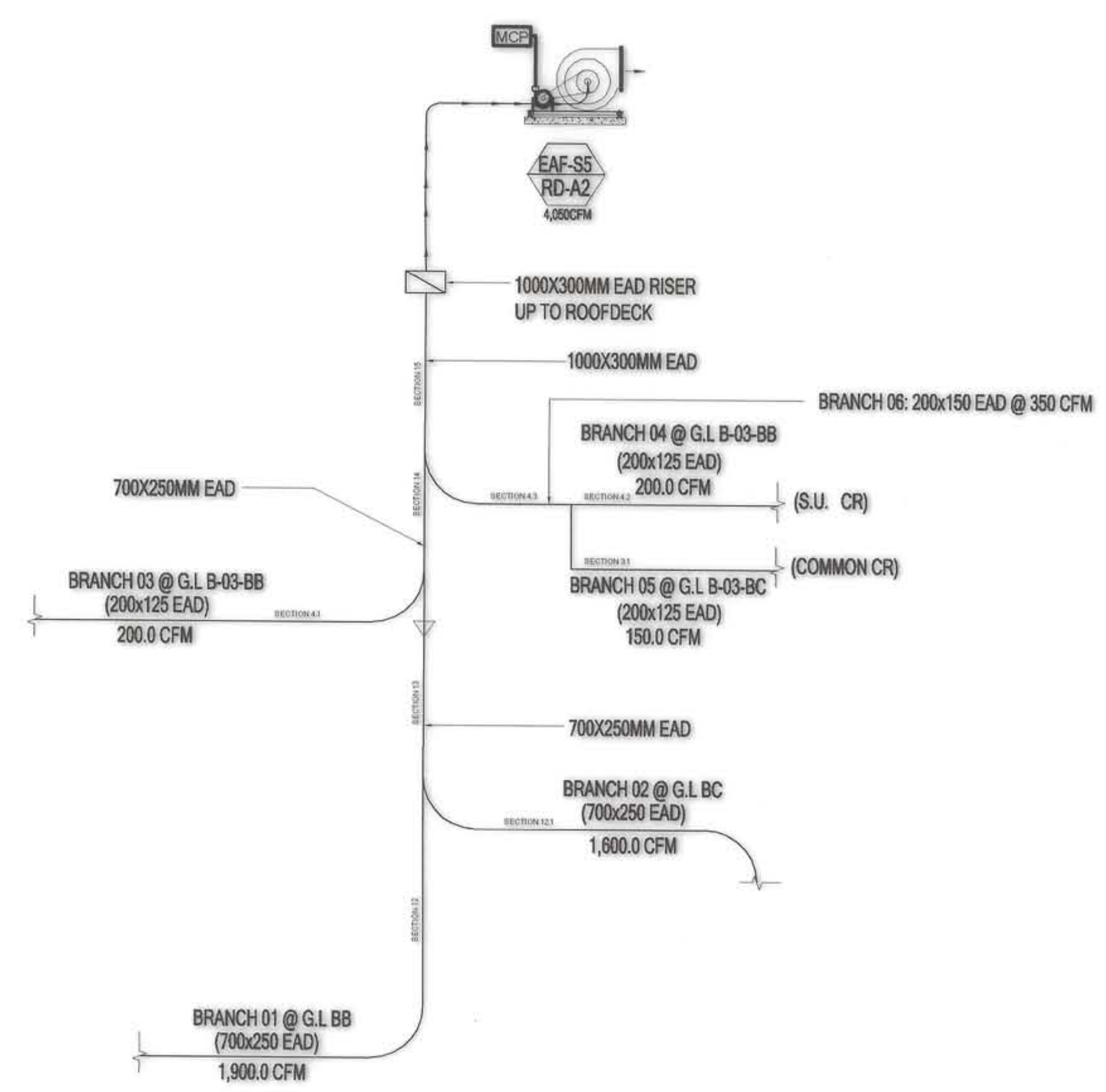
SYSTEM 05 - EAD RISER DIAGRAM
BRANCH 03 - 200.0 CFM
BLD'G. A



SYSTEM 05 - EAD RISER DIAGRAM
BRANCH 04 - 200 CFM
BLD'G. A



SYSTEM 05 - EAD RISER DIAGRAM
BRANCH 05 - 150 CFM
BLD'G. A



SYSTEM 05 - MAIN DUCT INTERCONNECTIONS OF BRANCHES
MAIN - 4,050.0 CFM
BLD'G. A

1 / ME — EXHAUST AIR DUCT RISER DIAGRAM - SYSTEM 05 - BLD'G. A
SCALE: NTS

OWNER : NGAC PHASE I JV COMPANY
BCDA AND MTD Clark Inc.
VIVENCIO B. DIZON, PRESIDENT
PATRICK NICHOLAS P. DAVID, PRESIDENT

PREPARED BY:
FREY-FIL CORPORATION
MANILA - DAVAO - CEBU - ILOILO
ZOILO S. DELA CRUZ
VICE PRESIDENT - OPERATION
REG No.: 0022657 | PTR No: 8118498
TIN No.: 116-426-274 | PLACE: MANILA
DATE: 01.20.2019

REVIEWED AND VALIDATED BY:
FILIPINAS DRAVO CORPORATION
Architectural & Engineering Consultants
ALFREDO R. REVILLA
PROJECT MANAGER

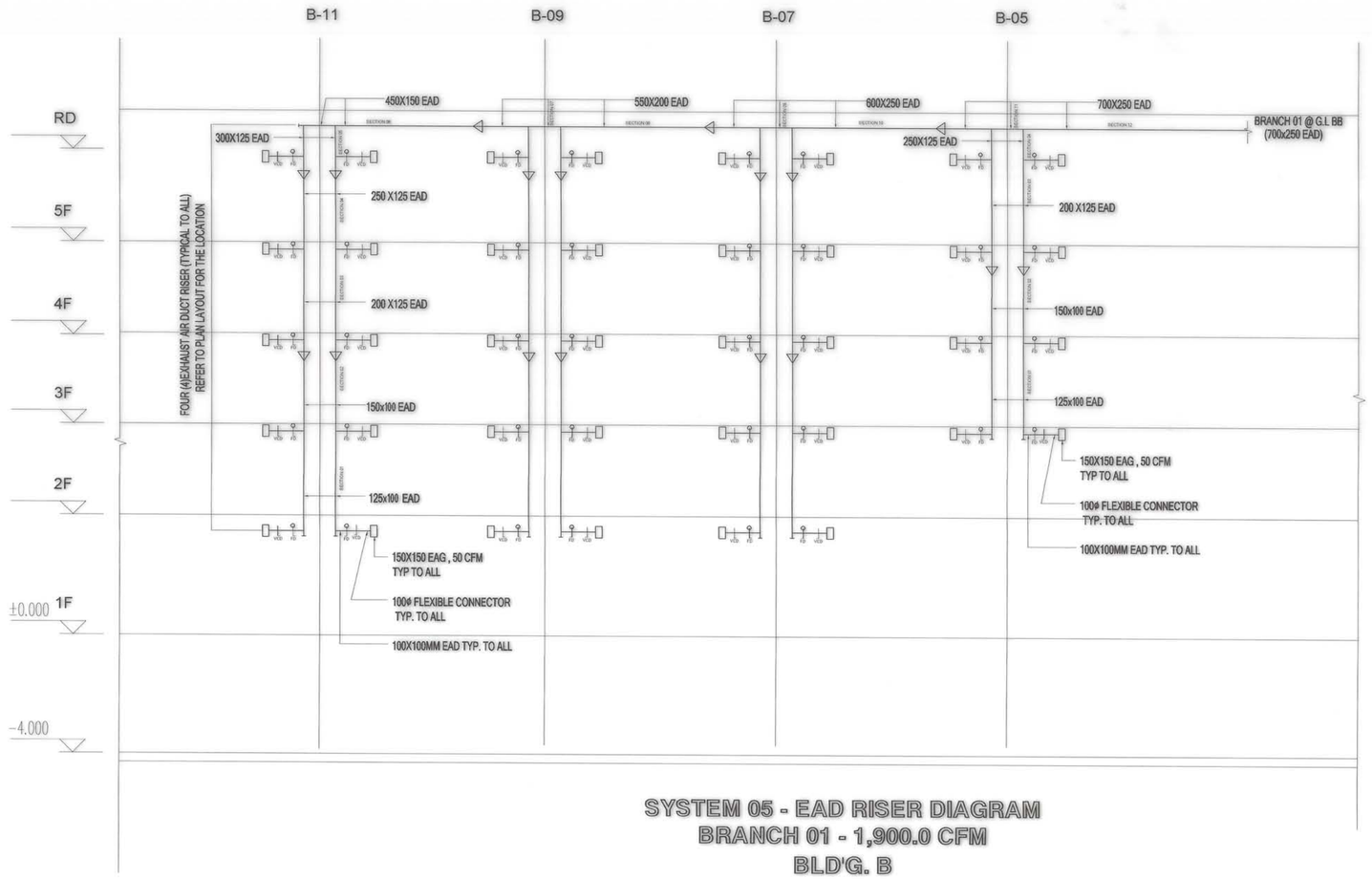
SUBMITTED BY:
BANDAR HEBAT BUILDERS, INC.
ISAAC S. DAVID
PRESIDENT

CERTIFIED BY: INDEPENDENT CONSULTANT
TCGI ENGINEERS
VIRGILIO A. MADRAZO
PRESIDENT/CEO

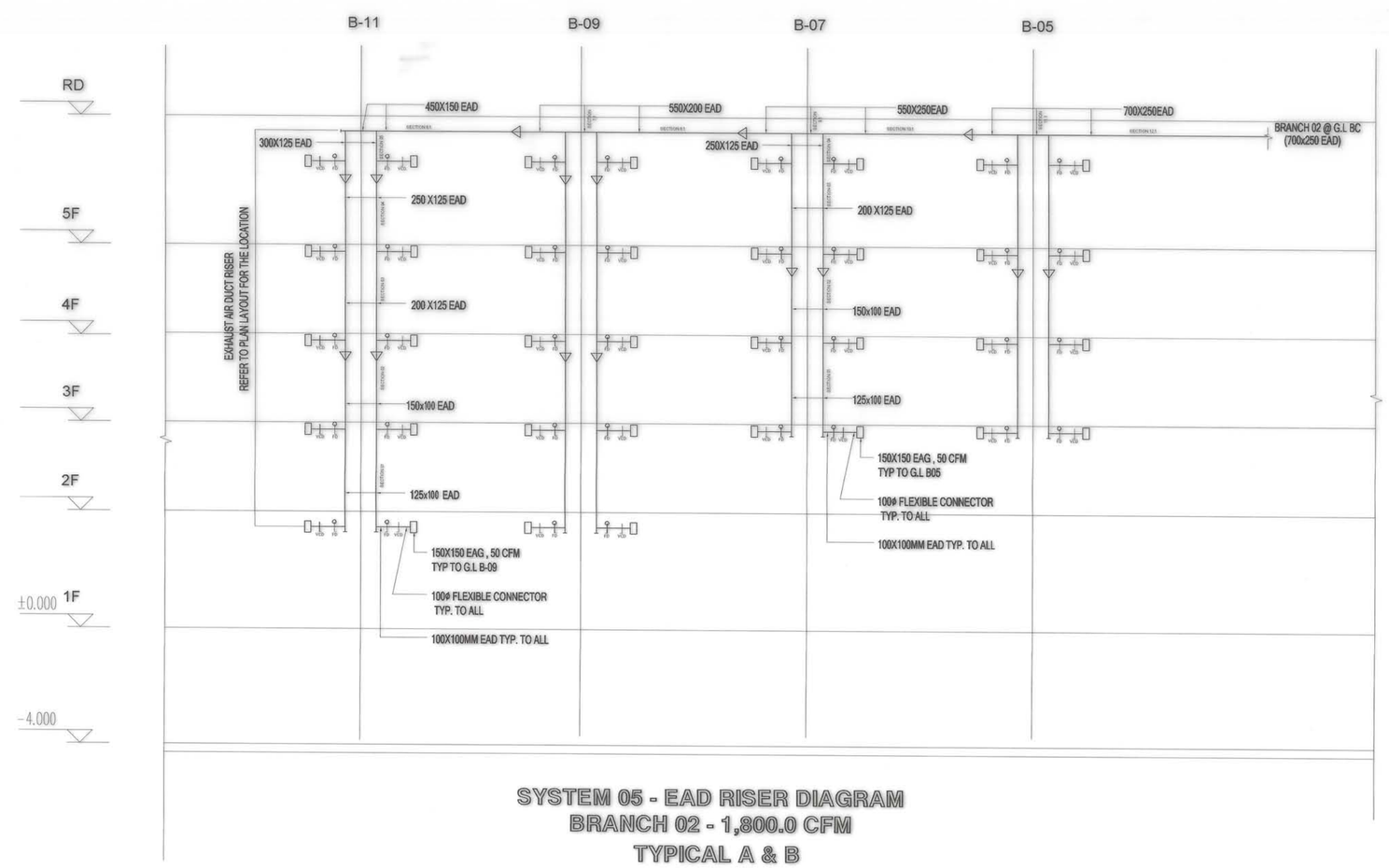
PROJECT TITLE:
AS-BUILT DRAWING
NGAC PHASE 1A
ATHLETES VILLAGE - BUILDING A
(AIR CONDITIONING & VENTILATION SYSTEM)
New Clark City, Capas, Tarlac

SHEET CONTENTS:
BLD'G."A" SYSTEM 05 - CENTRALIZED
TOILET VENTILATION EAD RISER
DIAGRAM

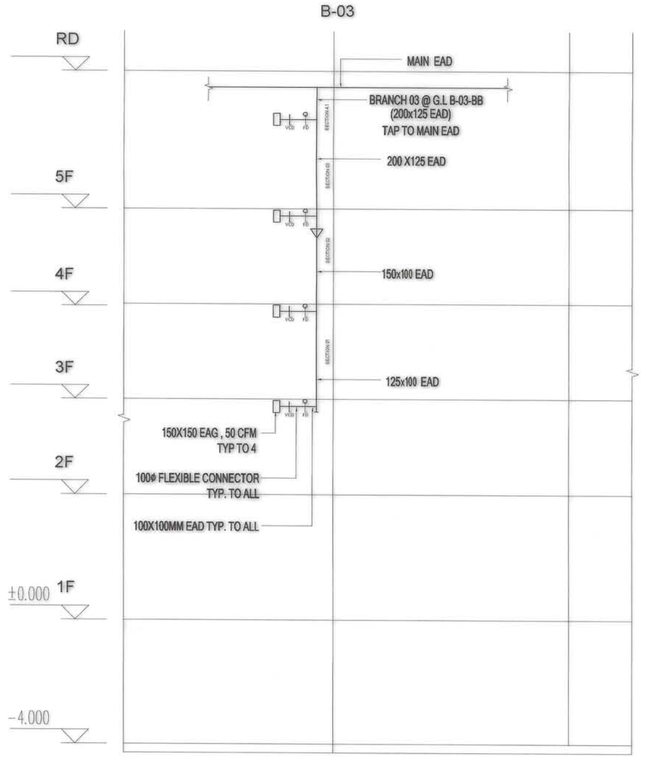
SHEET NO.
M-30



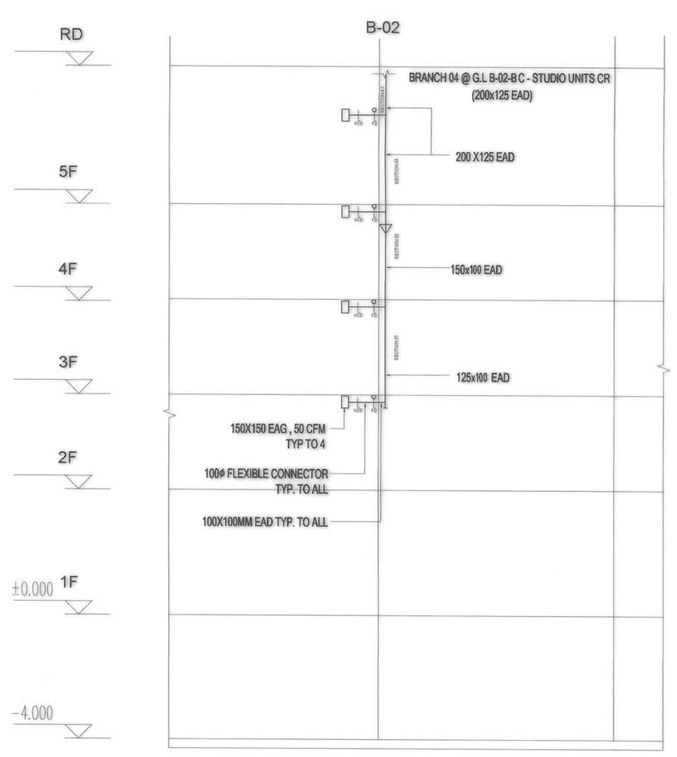
SYSTEM 05 - EAD RISER DIAGRAM
BRANCH 01 - 1,900.0 CFM
BLD'G. B



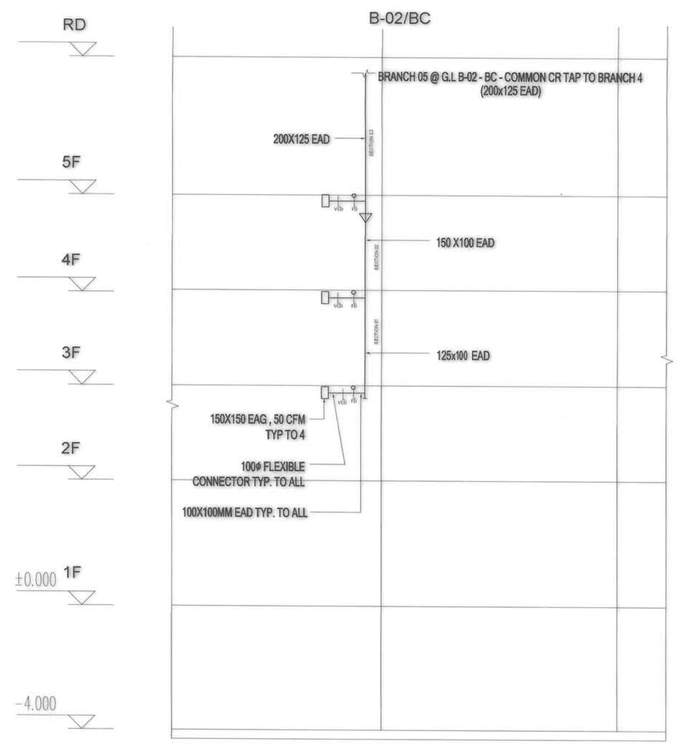
SYSTEM 05 - EAD RISER DIAGRAM
BRANCH 02 - 1,800.0 CFM
TYPICAL A & B



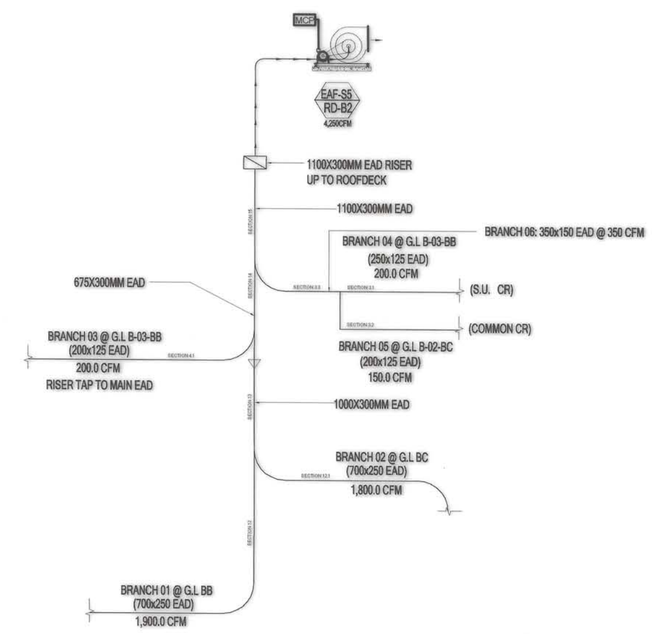
SYSTEM 05 - EAD RISER DIAGRAM
BRANCH 03 - 200.0 CFM
BLD'G. B



SYSTEM 05 - EAD RISER DIAGRAM
BRANCH 04 - 200 CFM
BLD'G. B



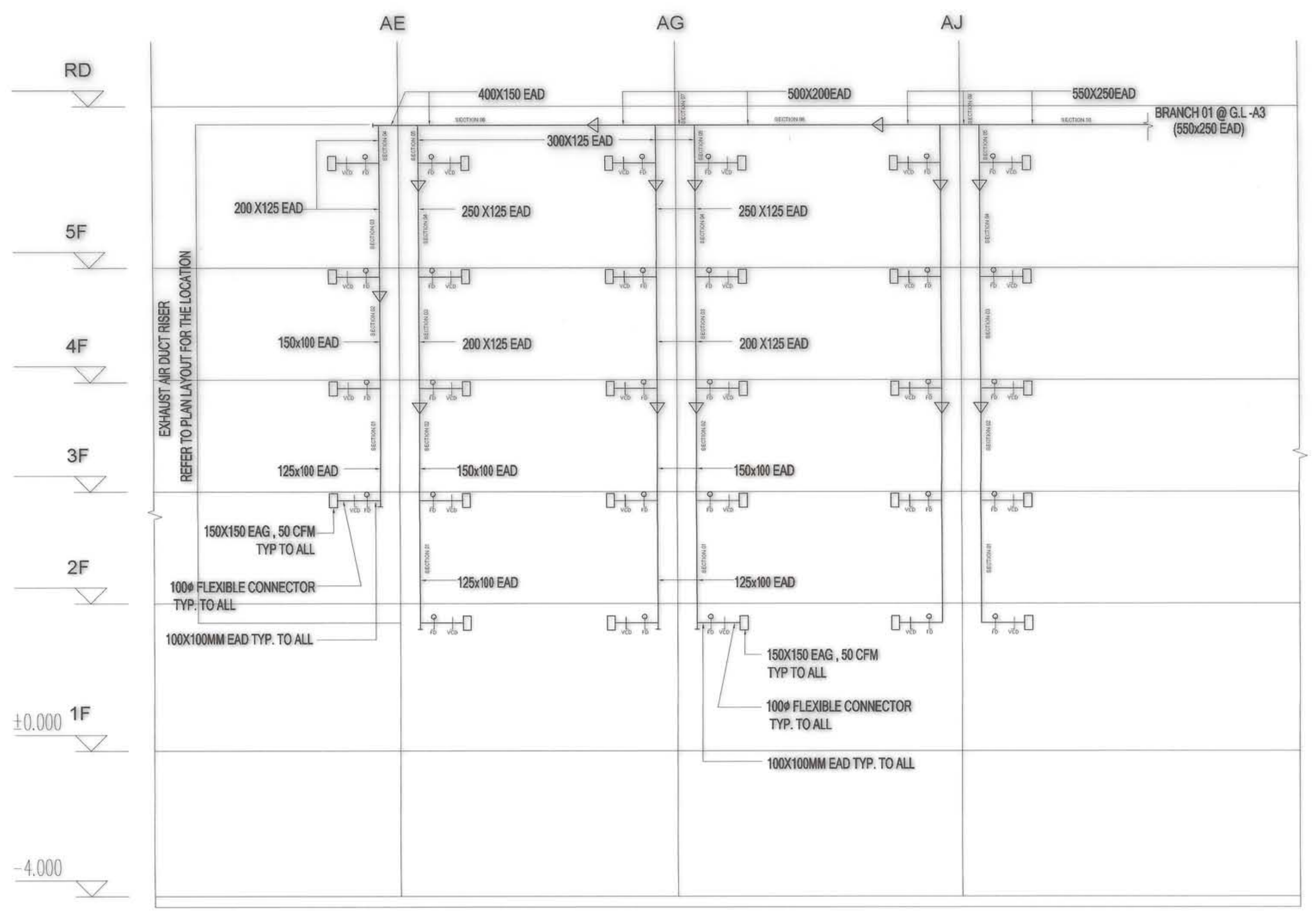
SYSTEM 05 - EAD RISER DIAGRAM
BRANCH 05 - 150 CFM
BLD'G. B



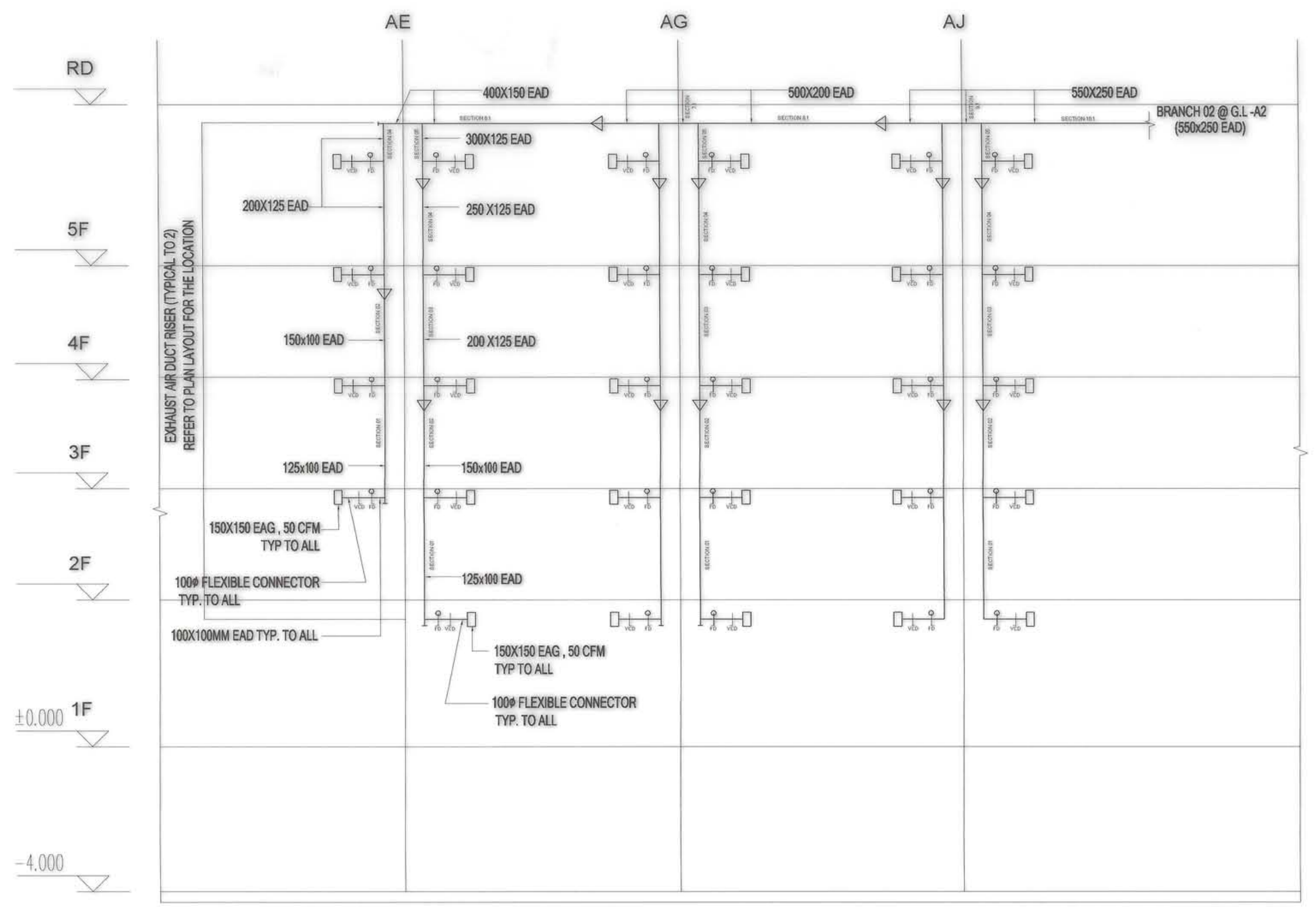
SYSTEM 05 - MAIN DUCT INTERCONNECTIONS OF BRANCHES
MAIN - 4,250.0 CFM
BLD'G. B

1/ME EXHAUST AIR DUCT RISER DIAGRAM - SYSTEM 05 - BLD'G. B
SCALE: NTS

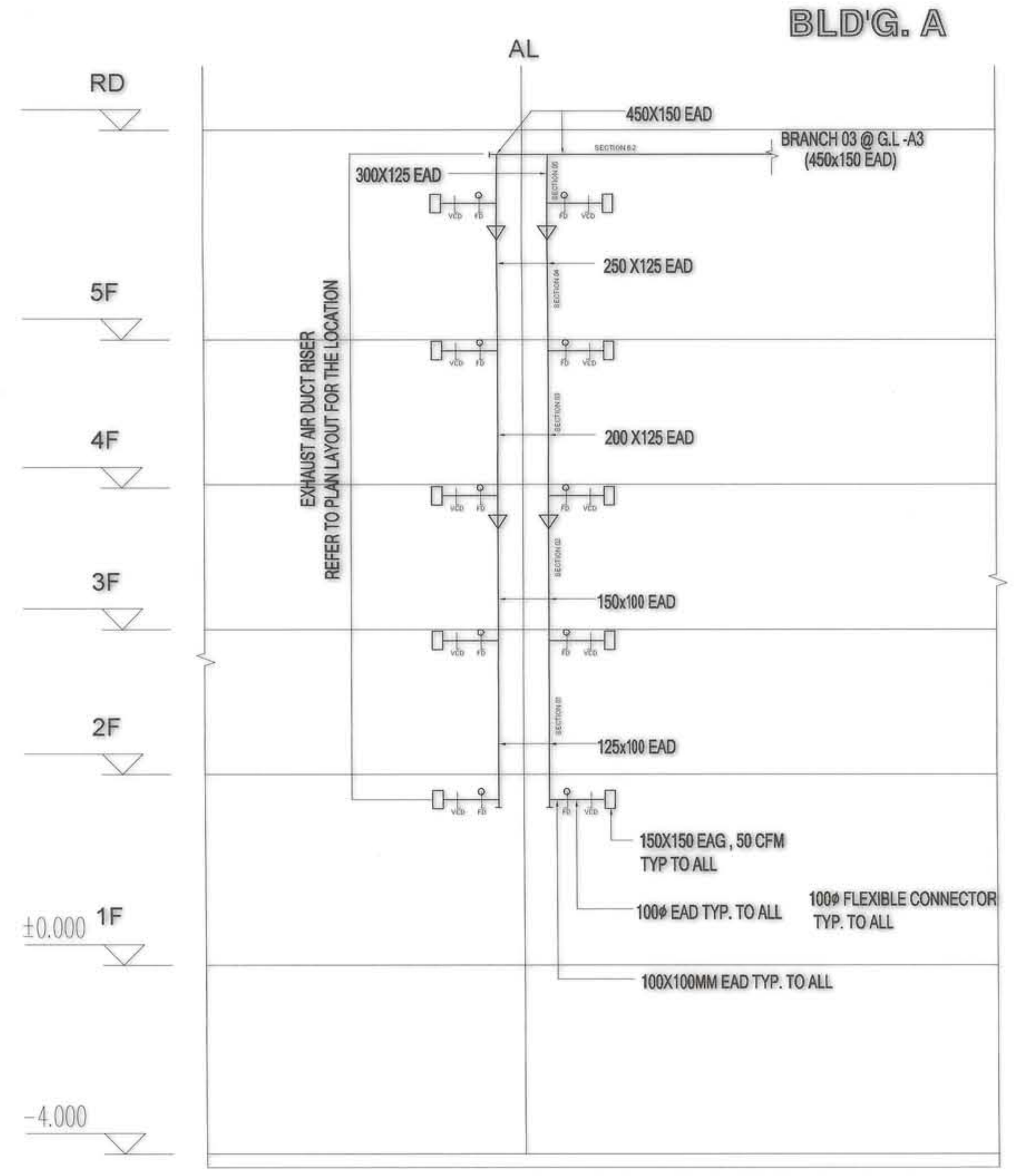
OWNER : NGAC PHASE I JV COMPANY Republic of the Philippines Office of the President BCDA Bases Conversion and Development Authority VIVENCIO B. DIZON, PRESIDENT AND MTD Clark Inc. PATRICK NICHOLAS P. DAVID, PRESIDENT	PREPARED BY: FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO 83 West ave.Brgy.Paltok,SFDM Quezon City www.freyfil.com Tel nos. 373-9365 ZOILO S. DELA CRUZ VICE PRESIDENT - OPERATION REG No.: 0022657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING B (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: BLD'G."B" SYSTEM 05 - CENTRALIZED TOILET VENTILATION EAD RISER DIAGRAM	SHEET NO. M-31



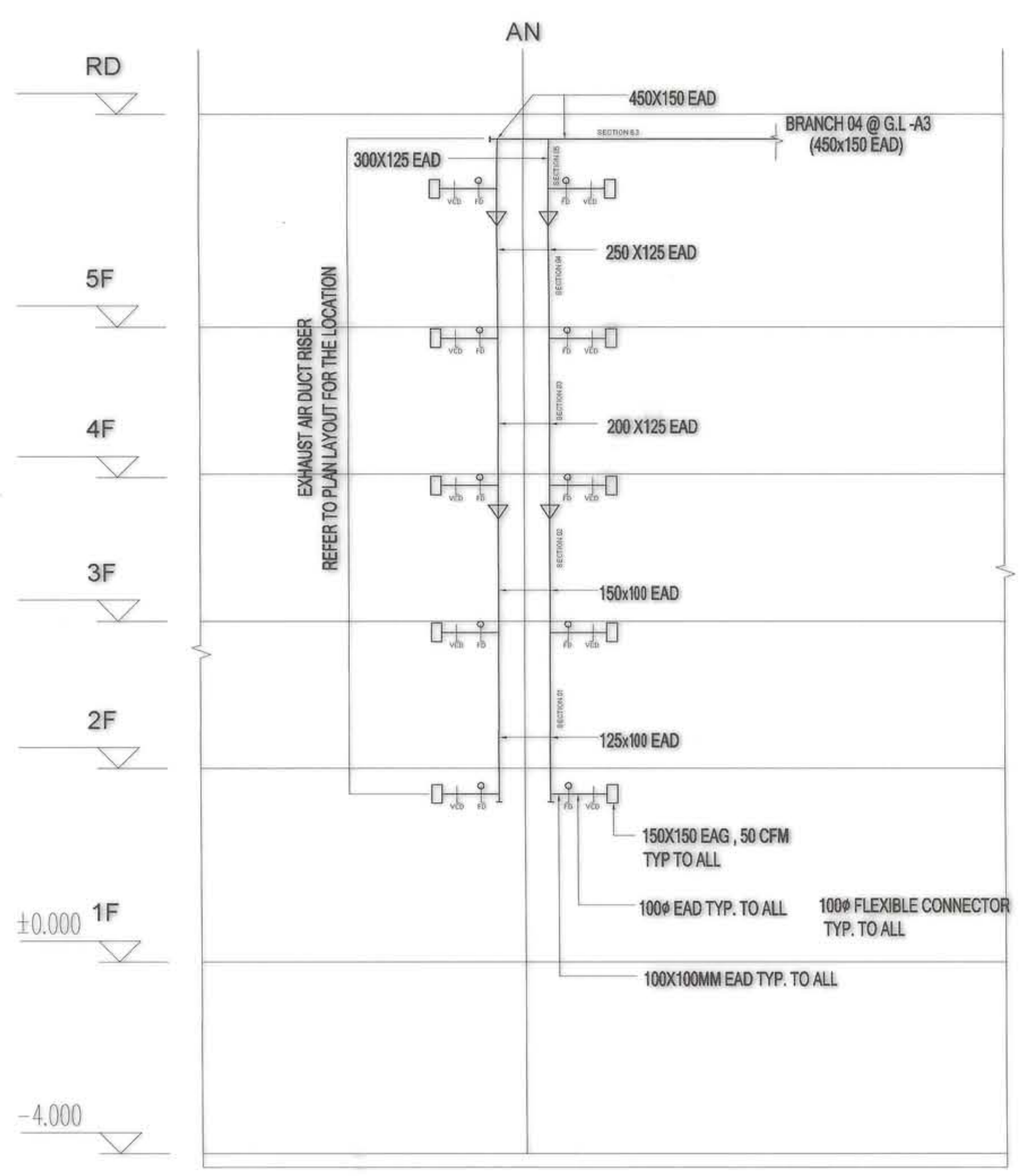
SYSTEM 06 - EAD RISER DIAGRAM
BRANCH 01 - 1,450.0 CFM
BLD'G. A



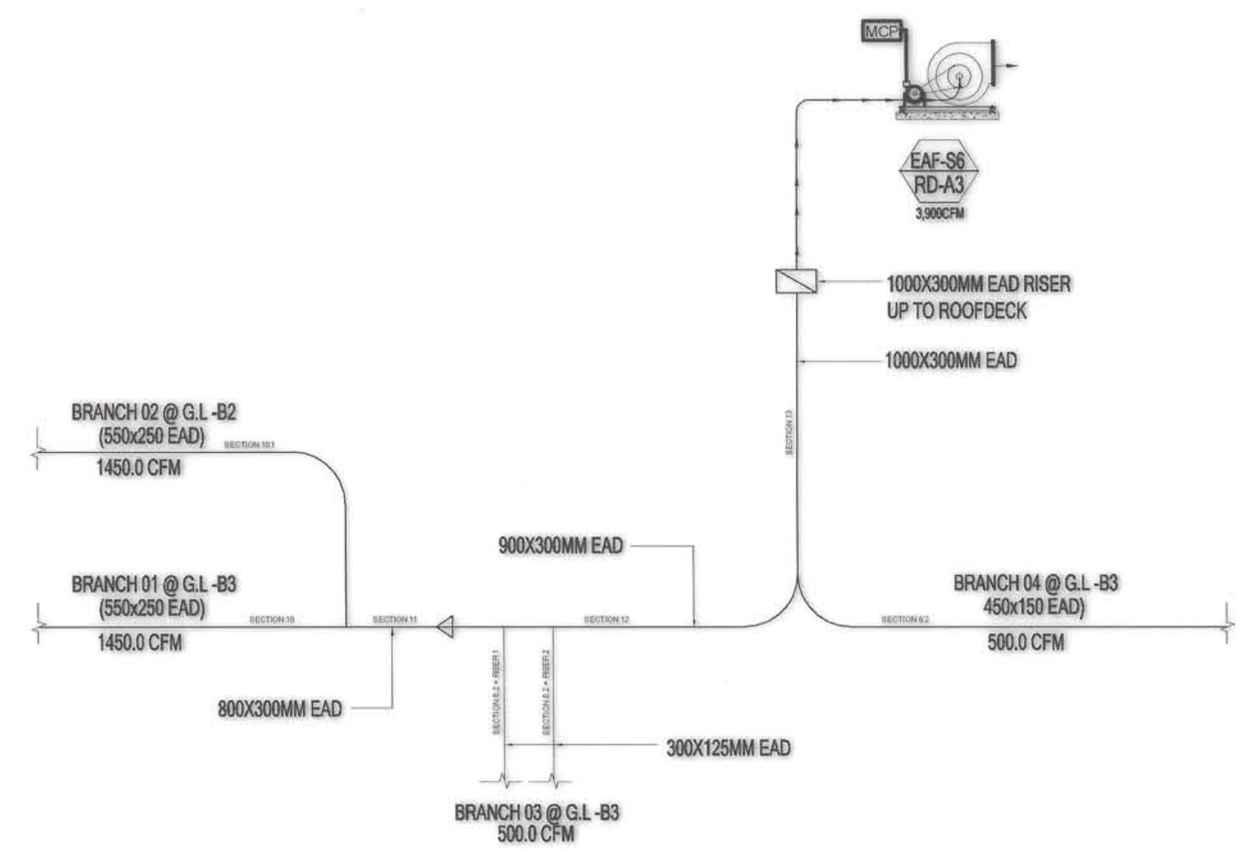
SYSTEM 06 - EAD RISER DIAGRAM
BRANCH 02 - 1,450.0 CFM
BLD'G. A



SYSTEM 06 - EAD RISER DIAGRAM
BRANCH 03 - 500.0 CFM
BLD'G. A



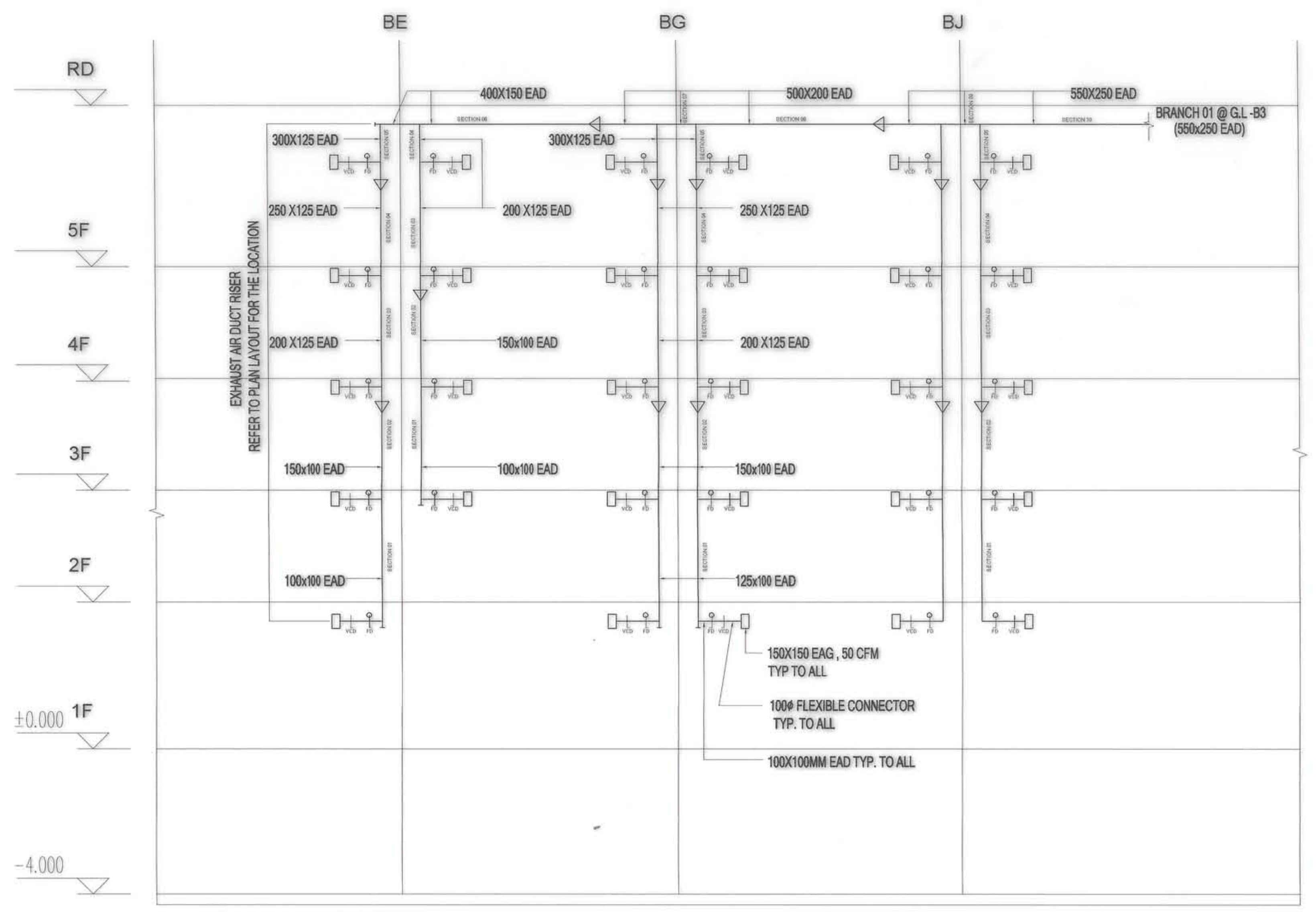
SYSTEM 06 - EAD RISER DIAGRAM
BRANCH 04 - 500.0 CFM
BLD'G. A



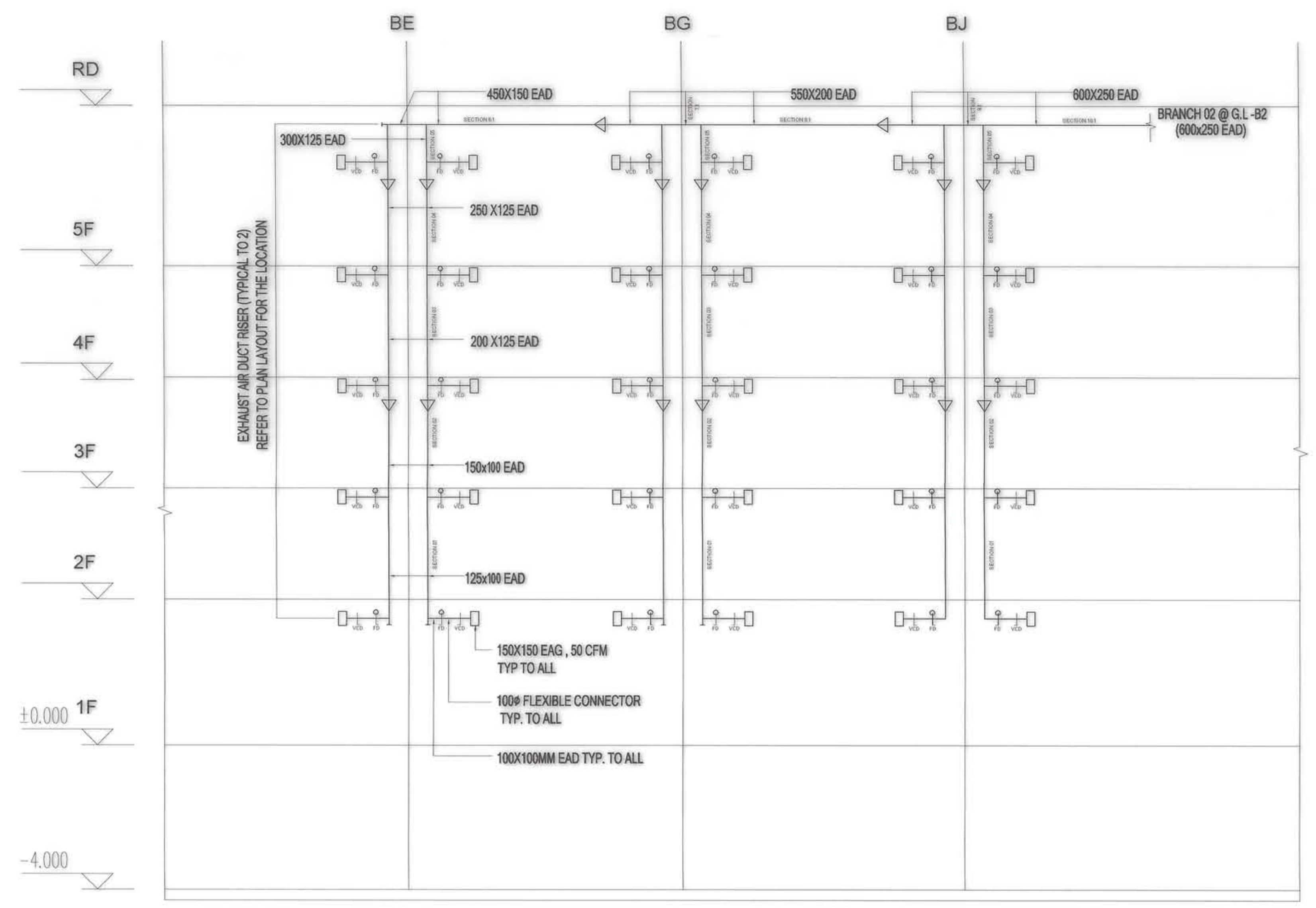
SYSTEM 06 - MAIN DUCT INTERCONNECTIONS OF BRANCHES
MAIN - 3,900.0 CFM
BLD'G. A

1 ME EXHAUST AIR DUCT RISER DIAGRAM - SYSTEM 06 - BLD'G. A
SCALE: NTS

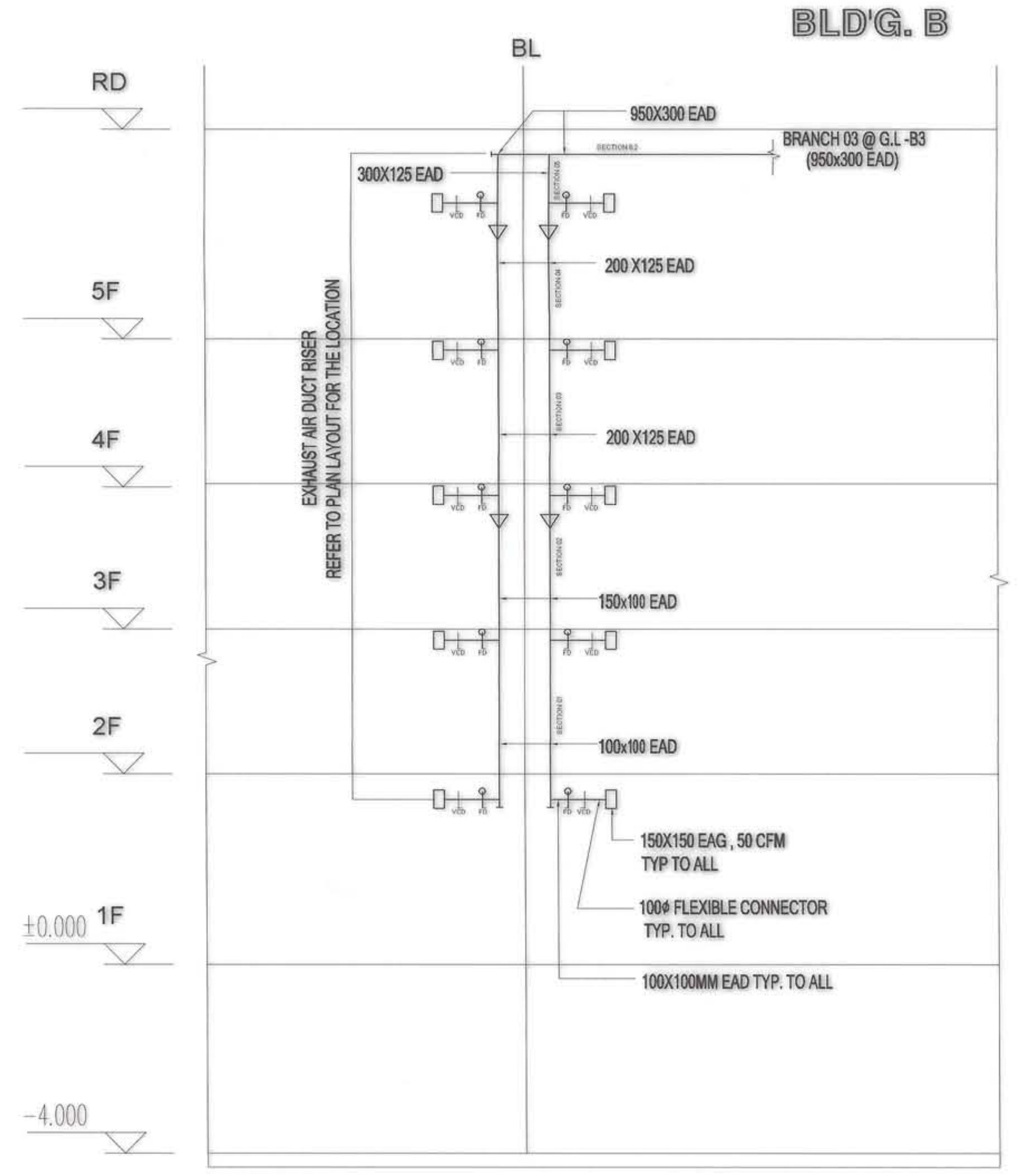
OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark, Inc. VIVENCIO B. DIZON PRESIDENT; PATRICK NICHOLAS P. DAVID PRESIDENT	FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO; ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION; REG No.: 0022657; PTR No: 8118498; TIN No.: 116-426-274; PLACE: MANILA; DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants; ALFREDO R. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS; VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE - BUILDING A (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	BLD'G."A" SYSTEM 06 - CENTRALIZED TOILET VENTILATION EAD RISER DIAGRAM	M-32



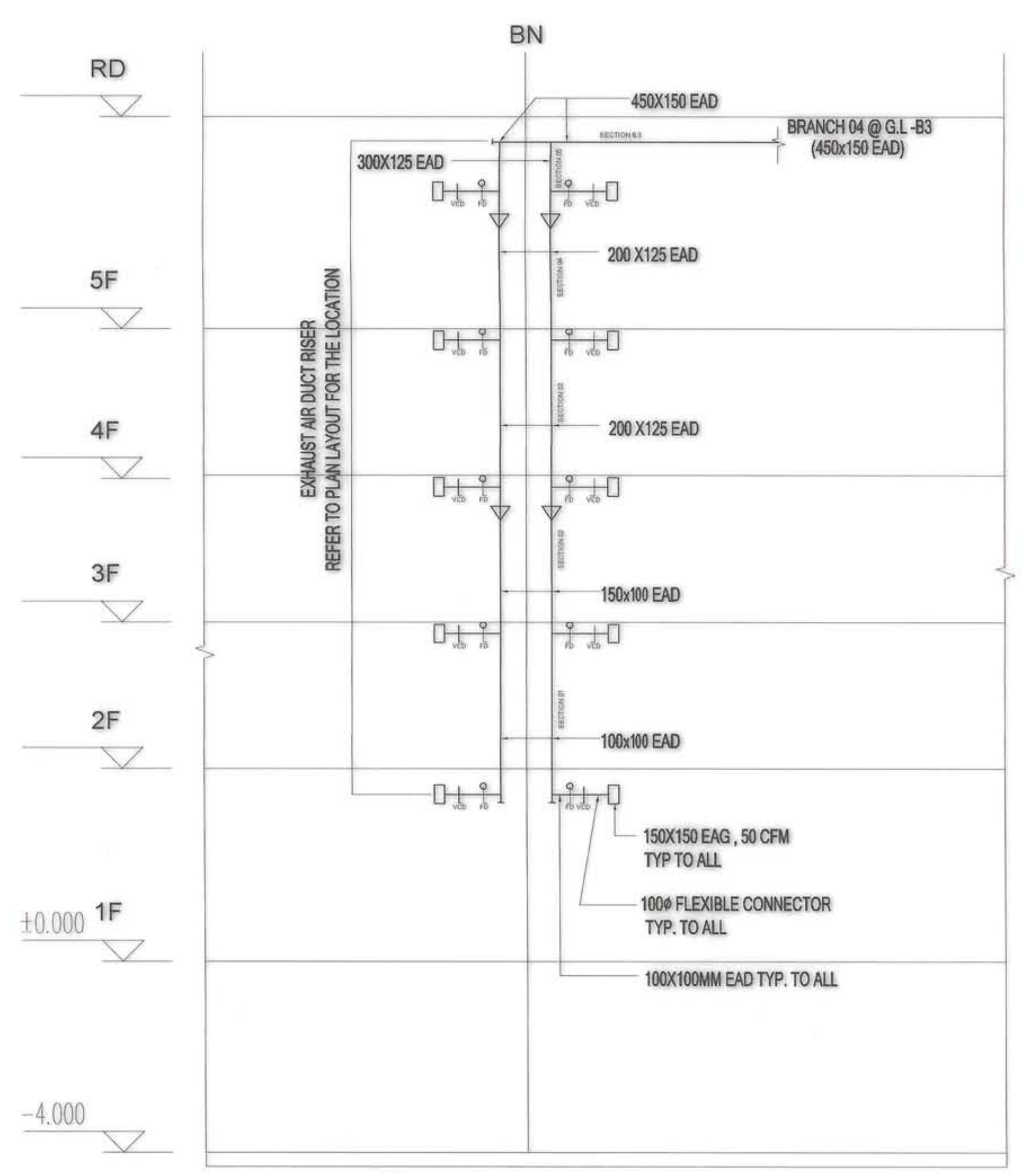
SYSTEM 06 - EAD RISER DIAGRAM
BRANCH 01 - 1,450.0 CFM
BLD'G. B



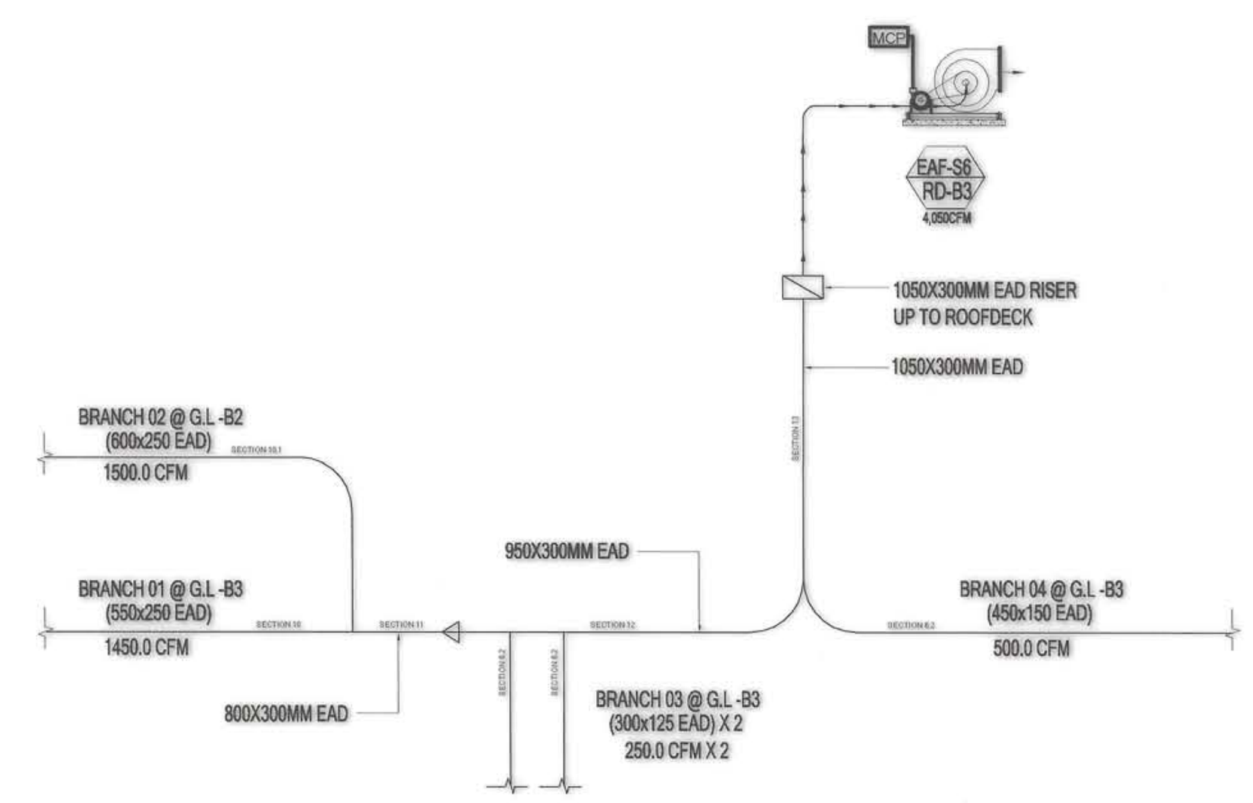
SYSTEM 06 - EAD RISER DIAGRAM
BRANCH 02 - 1,500.0 CFM
BLD'G. B



SYSTEM 06 - EAD RISER DIAGRAM
BRANCH 03 - 500.0 CFM
BLD'G. B



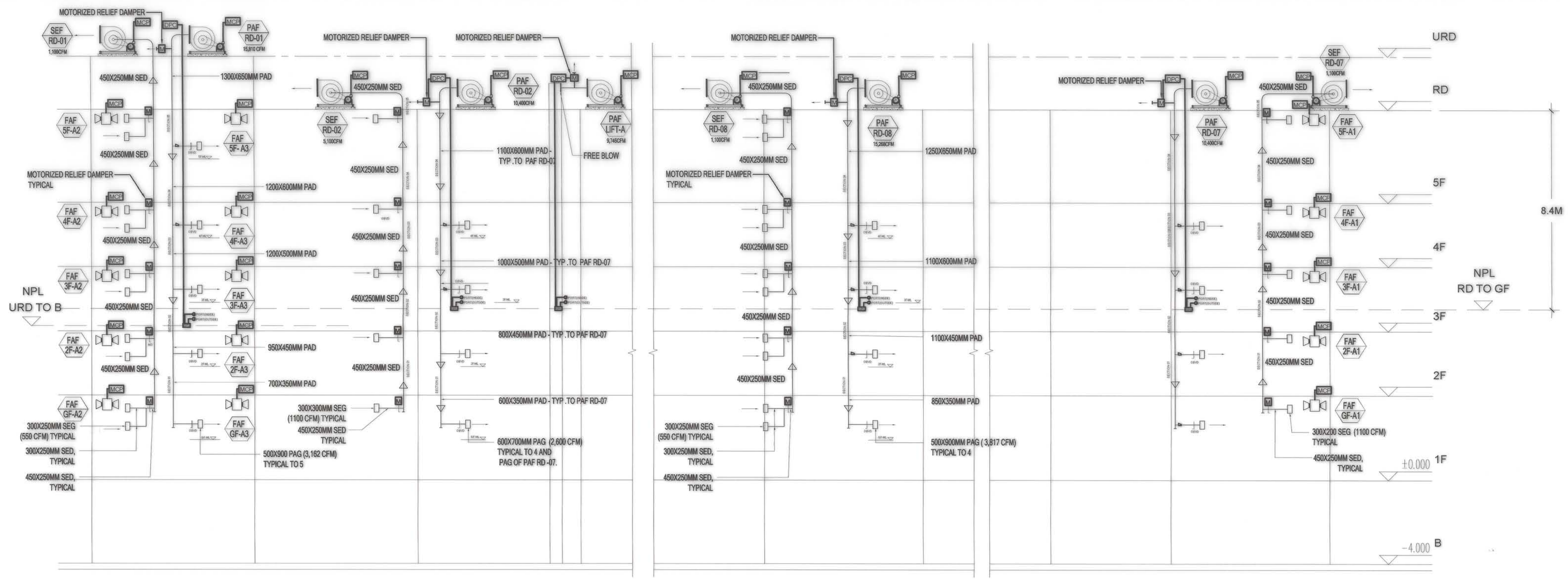
SYSTEM 06 - EAD RISER DIAGRAM
BRANCH 04 - 500.0 CFM
BLD'G. B



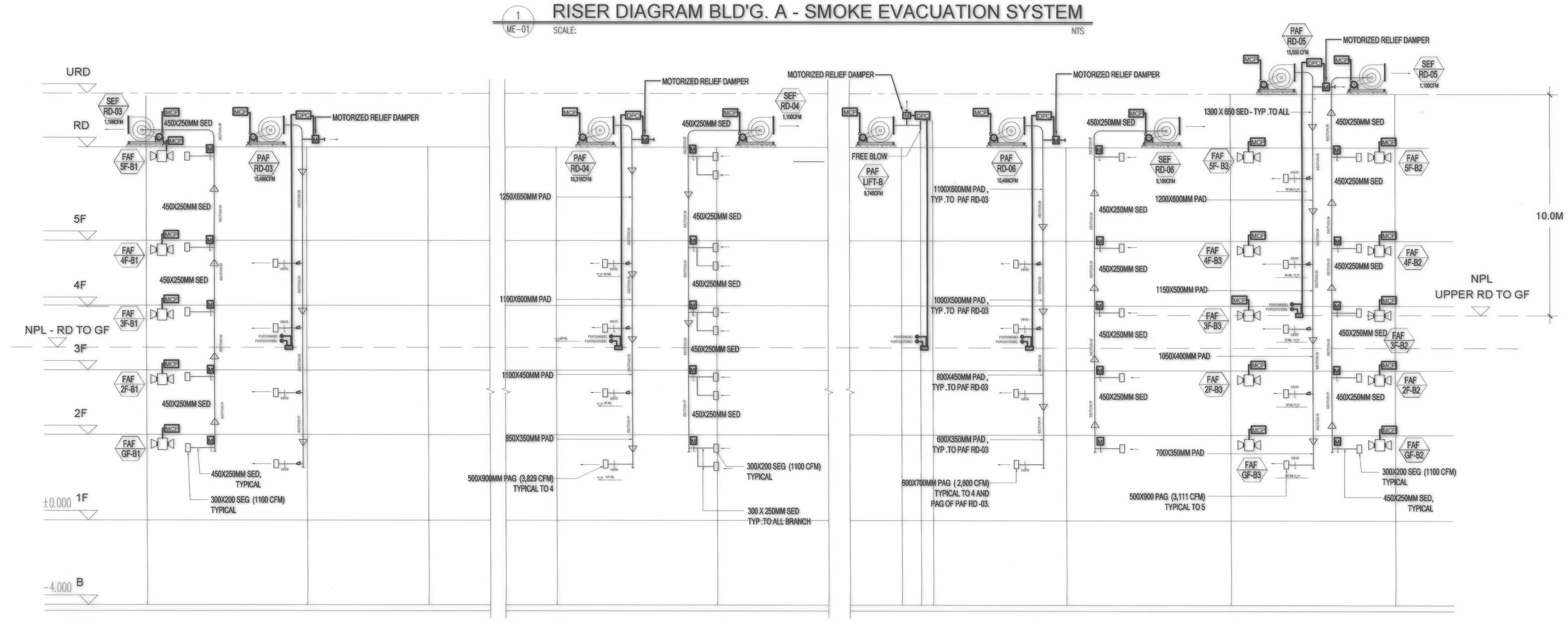
SYSTEM 06 - MAIN DUCT INTERCONNECTIONS OF BRANCHES
MAIN - 3,950.0 CFM
BLD'G. B

1 ME EXHAUST AIR DUCT RISER DIAGRAM - SYSTEM 06 - BLD'G. B
SCALE: NTS

OWNER: NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD Clark Inc. VIVENCIO B. DIZON, PRESIDENT; PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION, MANILA - DAVAO - CEBU - ILOILO; ZOILO S. DELA CRUZ, VICE PRESIDENT - OPERATION; REG No.: 0022657; PTR No: 8118498; TIN No.: 116-426-274; PLACE: MANILA; DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants; ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC.; ISAAC S. DAVID, PRESIDENT	TCGI ENGINEERS; VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING; NGAC PHASE 1A; ATHLETES VILLAGE - BUILDING B; (AIR CONDITIONING & VENTILATION SYSTEM); New Clark City, Capas, Tarlac	BLD'G."B" SYSTEM 06 - CENTRALIZED TOILET VENTILATION EAD RISER DIAGRAM	M-33



1 ME-01 RISER DIAGRAM BLD'G. A - SMOKE EVACUATION SYSTEM
SCALE: NTS



1 ME-02 RISER DIAGRAM BLD'G. B - SMOKE EVACUATION SYSTEM
SCALE: NTS

SEQUENCE OF OPERATION:

01.) ALL PRESSURIZATION AIR FANS (PAF) AND SMOKE EXTRACTION FANS (SEF) WILL AUTOMATICALLY ENERGIZED/RUN ONCE IT RECEIVE SIGNAL FROM FDAS OR FIRE ALARM CONTROL PANEL (FACP.)

02.) ALL FRESH AIR FANS WILL AUTOMATICALLY SHUT OFF ONCE IT RECEIVE SIGNAL FROM FDAS.

03.) THE MOTORIZED DAMPER CONTROLLED WITH DIFFERENTIAL PRESSURE SENSOR WERE INSTALLED TO MAINTAIN THE STAIRWELLS/ELEVATOR SHAFT REQUIRED DIFFERENTIAL PRESSURE WITH RESPECT TO HALLWAY OR ELEVATOR LOBBY.

04.) THE SMOKE EXTRACTION FAN WILL BE ENERGIZED ONCE IT RECEIVES SIGNAL FROM FDAS OR FACP. THE MOTORIZED DAMPER (MP) ON SMOKE EXTRACTION DUCTWORKS SHALL REMAIN OPEN ON FIRE FLOOR AREA. ON THE OTHER FLOORS THE MOTORIZED DAMPER SHALL BE CLOSED.

05.) THE PRESSURIZATION AIR FANS ELECTRO-MECHANICAL TYPE CONTROL SYSTEM "(MOTORIZED DAMPER) FOR DIFFERENTIAL PRESSURE IS SET AT 50 Pa (0.2 I.W.G),

06.) 50 PASCAL IS THE MAXIMUM DIFFERENTIAL PRESSURE REQUIREMENTS OF THE STAIRWELLS AND ELEVATOR FIREMAN LIFT'S SHAFT WITH RESPECT TO HALLWAY OR ADJACENT ROOM. IF THIS SET POINT EXCEEDED, THE DPS INSTALLED AT "NPL" LINE WILL ACTIVATE THE MOTORIZED DAMPER TO OPEN AND WILL RELEASE AND REDUCE AIR TO MAINTAIN THE MAXIMUM DIFFERENTIAL PRESSURE REQUIREMENTS WHEN ALL DOORS ARE CLOSED OR AS NEEDED.

07.) ELEVATOR SHAFT WILL ALSO AUTOMATICALLY ENERGIZED/RUN ONCE IT RECEIVE SIGNAL FROM FDAS OR FIRE ALARM CONTROL PANEL (FACP.) DURING FIRE. - THE SYSTEM IS FREE BLOW ONLY.

08.) THE MAXIMUM FORCE REQUIRED TO OPEN ANY DOOR AT THE DOOR HANDLE WILL NOT EXCEED 30 POUNDS (133N).

09.) WHEN ALL REQUIRED DOORS ARE OPEN SIMULTANEOUSLY OR AT THE SAME TIME , THE MINIMUM PRESSURE TO THE OTHER DOOR "(CLOSED DOOR WITH RESPECT TO HALLWAY)" HAVE MAINTAINED AT 12.4 Pa DIFFERENTIAL PRESSURE.

10.) THE DISTANCE OF THE AIR INTAKE OF THE PRESSURIZATION ARE NOT LESS THAN 5M HORIZONTALLY FROM EXHAUST DISCHARGE OPENING OF THE SMOKE EXTRACTIONS SYSTEM.

11.) TESTING AND COMMISSIONING WERE PERFORMED IN ACCORDANCE TO APPLICABLE CODE AND STANDARD.

12.) SIMULATION TESTING STANDARD FORMAT HAVE PREPARED BY THE OWNER REPRESENTATIVE, AND THE MECHANICAL CONTRACTOR WILL PROVIDE ALL THE NEEDED INSTRUMENT FOR THE T&C AND SIMULATION TOGETHER WITH THE SUPPLIER OR THE DISTRIBUTOR AND WITNESS AND APPROVED BY THE OWNER REPRESENTATIVE/CONSULTANT.

LEGEND:

PAF = PRESSURIZATION AIR FAN
SEF = SMOKE EXTRACTION FAN
FAF = FRESH AIR FAN
SEG = SMOKE EXTRACTION GRILLE
PAG = PRESSURIZATION AIR GRILLE
CFM = CUBIC FEET PER MINUTE
Pa= PASCALS
SED = SMOKE EXTRACTION DUCT
PAD = PRESSURIZATION AIR DUCT
IWG/ In. WG = INCH OF WATER GAUGE
DELTA P= DIFFERENTIAL PRESSURE
OBVD= OPPOSED BLADE VOLUME DAMPER
VCD/VD= VOLUME CONTROL DAMPER/VOLUME DAMPER
TYP. = TYPICAL
ML = MIDDLE LANDING
FOB = FLAT ON BOTTOM
FOT = FLAT ON TOP
NPL = NEUTRAL PLANE LEVEL
MCP = MOTOR CONTROL PANEL
DPC = DIFFERENTIAL PRESSURE CONTROLLER
DPS = DIFFERENTIAL PRESSURE SENSOR
M = MOTORIZED RELIEF DAMPER

OWNER : NGAC PHASE I JV COMPANY
BCDA AND MTD
VIVENCIO B. DIZON, PRESIDENT
PATRICK NICHOLAS P. DAVID, PRESIDENT

PREPARED BY:
FREY-FIL CORPORATION
MANILA - DAVAO - CEBU - ILOILO
ZOILO S. DELA CRUZ
VICE PRESIDENT-OPERATION
REG. No.: 0022657 | PTR No.: 8118495
TIN No.: 116-426-274 | PLACE: MANILA
DATE: 01.20.2019

REVIEWED AND VALIDATED BY:
FILIPINAS DRAVO CORPORATION
Architectural & Engineering Consultants
ALFREDO R. REVILLA
PROJECT MANAGER

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BANDAR HEBAT BUILDERS, INC.
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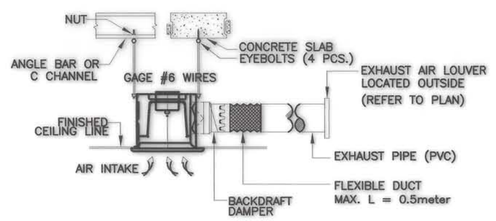
CERTIFIED BY: INDEPENDENT CONSULTANT
TCGI ENGINEERS
VIRGILIO A. MADRAZO
PRESIDENT/CEO

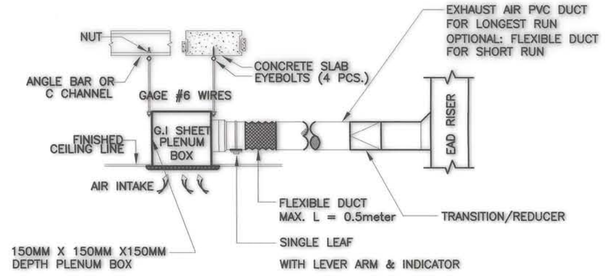
PROJECT TITLE:
AS-BUILT DRAWING
NGAC PHASE 1A
ATHLETES VILLAGE - BUILDING A & B
(AIR CONDITIONING & VENTILATION SYSTEM)
New Clark City, Capas, Tarlac

SHEET CONTENTS:
BLD'G. "A" AND "B" SMOKE
EVACUATION RISER DIAGRAM

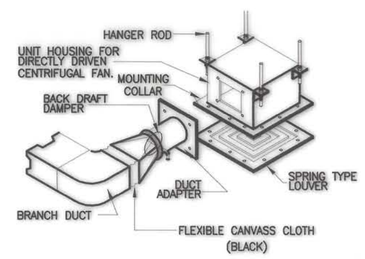
SHEET NO.
M-34



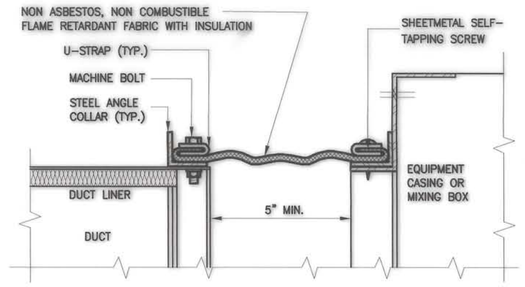
1 ME — CEILING CASSETTE EXHAUST FAN MOUNTING DETAIL
SCALE: NTS



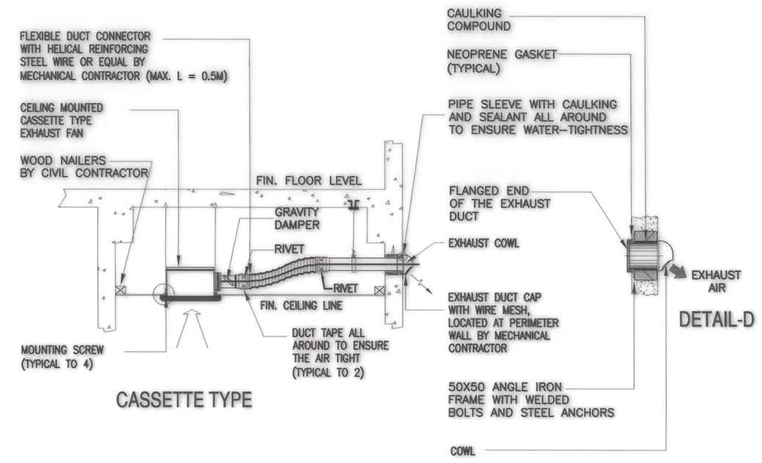
2 ME — EXHAUST AIR GRILLE MOUNTING DETAIL
SCALE: NTS



3 ME — CEILING MOUNTED EXHAUST FAN DETAIL (G.I DUCT CONNECTION DETAILS)
SCALE: NTS



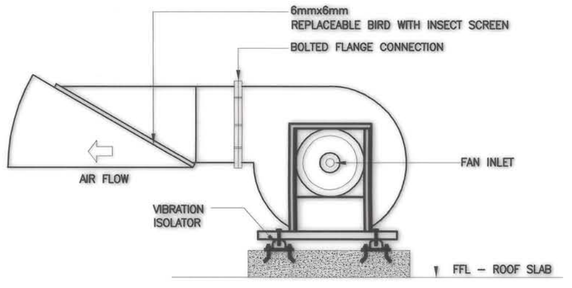
4 ME — FLEXIBLE DUCT CONNECTOR DETAILS
SCALE: NTS

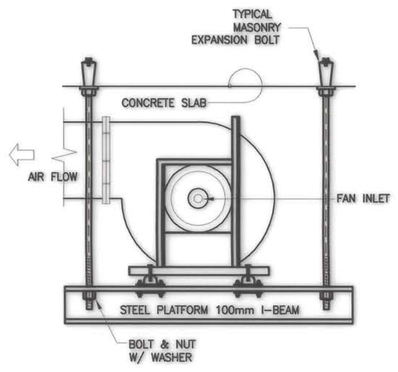


CASSETTE TYPE

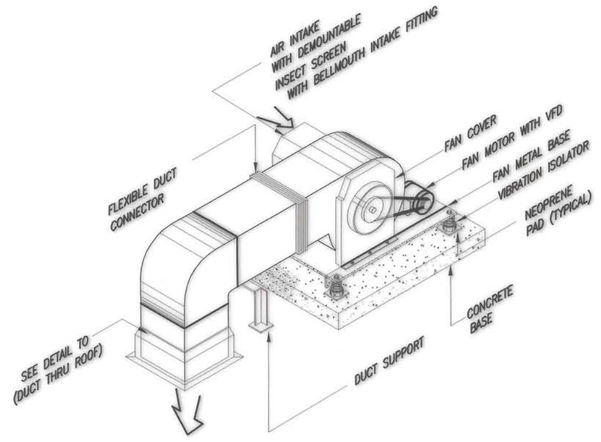
DETAIL-D

5 ME — CEILING EXHAUST FAN OTHER DETAIL
SCALE: NTS

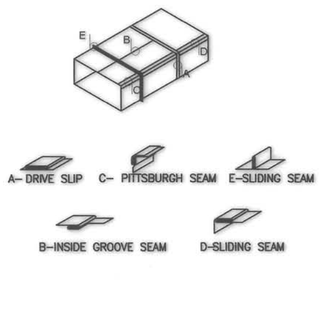




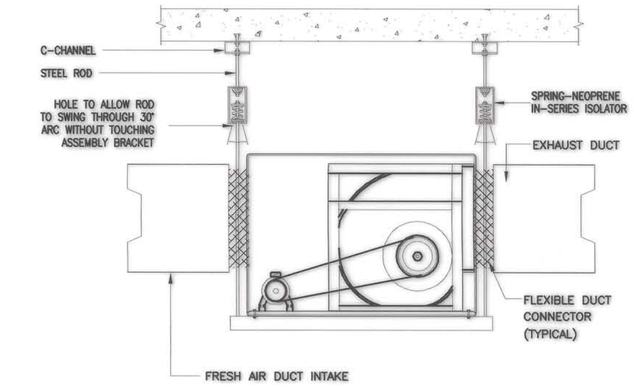
6 ME — EXHAUST BLOWER INSTALLATION DETAIL
SCALE: NTS



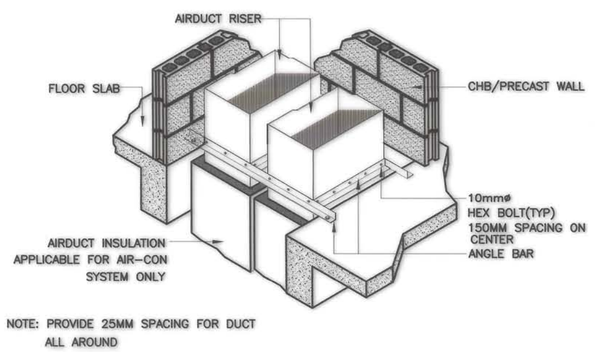
7 ME — PRESSURIZATION SISW FAN ISOMETRIC DETAILS
SCALE: NTS



8 ME — G.I. DUCT JOINTS DETAIL
SCALE: NTS

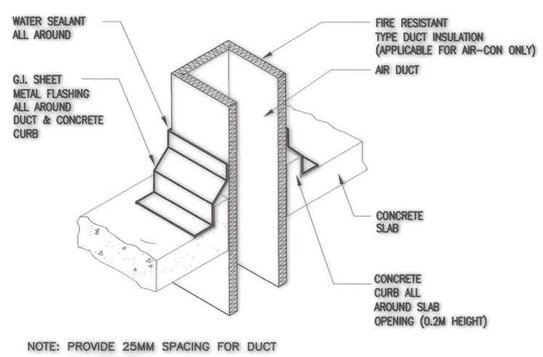


9 ME — CABINET TYPE FRESH AIR FAN DETAILS
SCALE: NTS

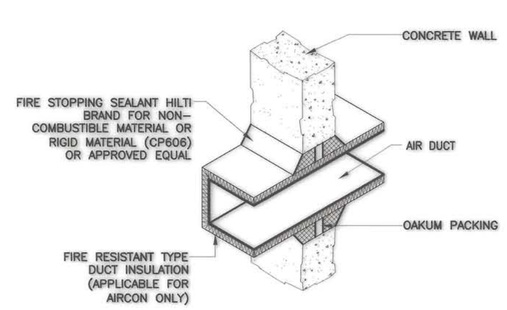


NOTE: PROVIDE 25MM SPACING FOR DUCT ALL AROUND

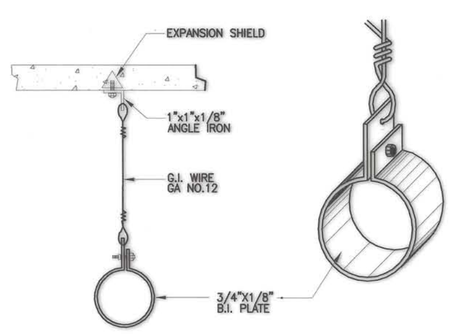
10 ME — AIRDUCT RISER SUPPORT DETAIL
SCALE: NTS



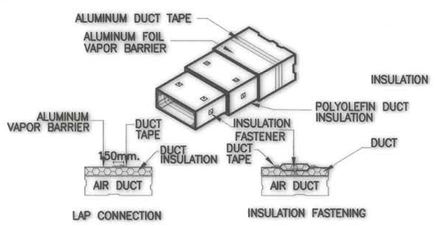
NOTE: PROVIDE 25MM SPACING FOR DUCT ALL AROUND



11 ME — DUCT THRU ROOF/WALL DETAIL
SCALE: NTS



12 ME — FLEXIBLE DUCT HANGER DETAIL
SCALE: NTS



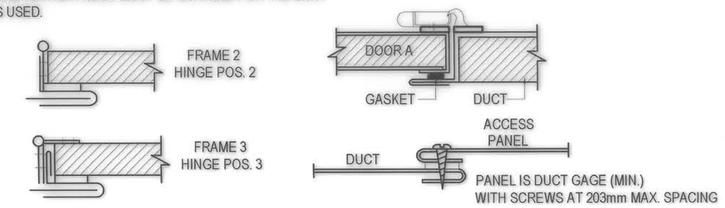
13 ME — DUCT INSULATION
SCALE: NTS

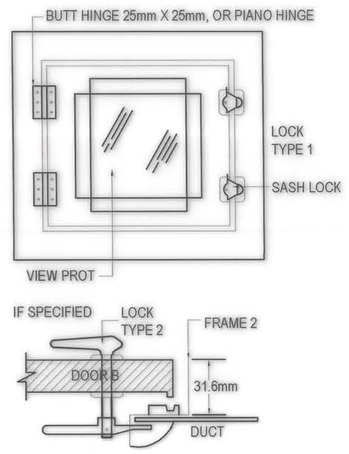
OWNER : NGAC PHASE I JV COMPANY BCDA — AND — MTD Group Inc. VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	PREPARED BY: FREY-FIL CORPORATION MANILA - DAVAO - CEBU - ILOILO ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 0022657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: MISCELLANEOUS DETAILS 01	SHEET NO. M-35

	DOOR SIZE (MM)	NO. HINGES	NO. LOCKS	METAL GAGE		
				FRAME (MM)	DOOR (MM)	BACK (MM)
500 Pa STATIC AND LESS	350 X 350	2	1 - S	0.70	0.55	0.55
	406 X 508	2	2 - S	0.85	0.70	0.55
	610 X 610	3	2 - S	0.85	0.85	0.55
750 Pa STATIC	350 X 350	2	1 - S	0.85	0.85	0.55
	406 X 508	2	1 - S, 1 - T, 1 - B	1.00	1.00	0.55
	610 X 610	3	2 - S, 1 - T, 1 - B	1.00	1.00	0.70
1000 Pa AND 2000 Pa	350 X 350	2	1 - S, 1 - T, 1 - B	1.00	1.00	0.55
	406 X 508	3	2 - S, 1 - T, 1 - B	1.00	1.31	0.70
	610 X 610	3	2 - S, 2 - T, 2 - B	1.31	1.31	0.70

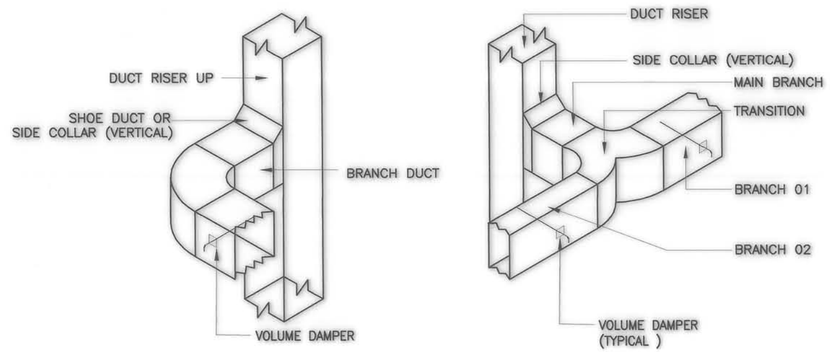
S = SIDE OPPOSITE HINGES, T = TOP, B = BOTTOM

NOTE : CONSTRUCTION AND AIRTIGHTNESS MUST BE SUITABLE FOR THE DUCT PRESSURE CLASS USED.

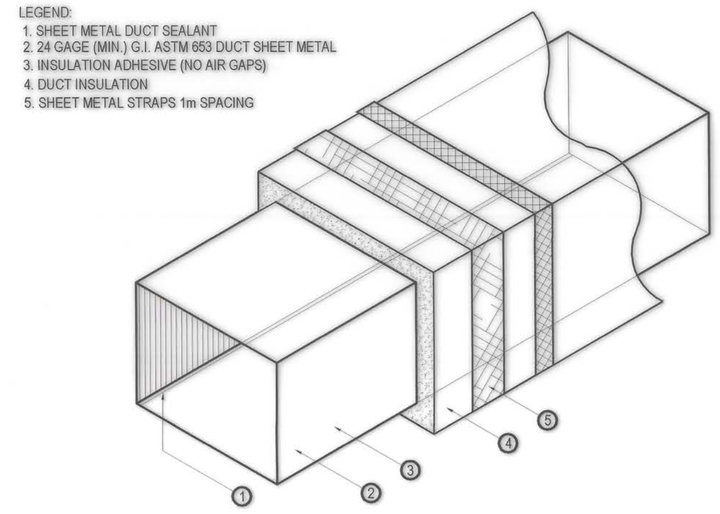




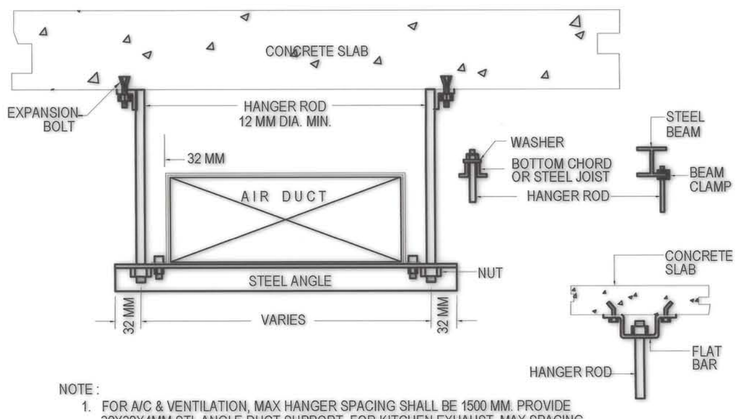
17 ME — DUCT ACCESS DOORS AND PANELS DETAIL
SCALE: NTS



18 ME — TYPICAL RISER DUCT CONNECTIONS
SCALE: NTS

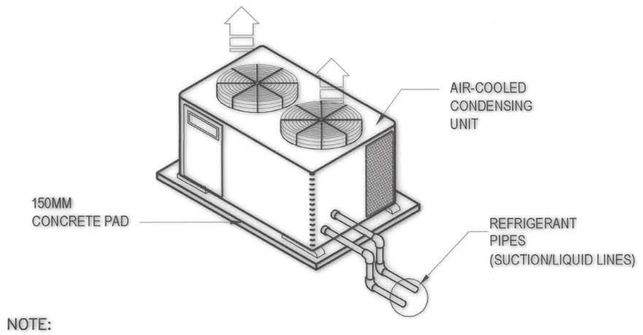


19 ME — APPLICATION METHOD FOR DUCT INSULATION
SCALE: NTS



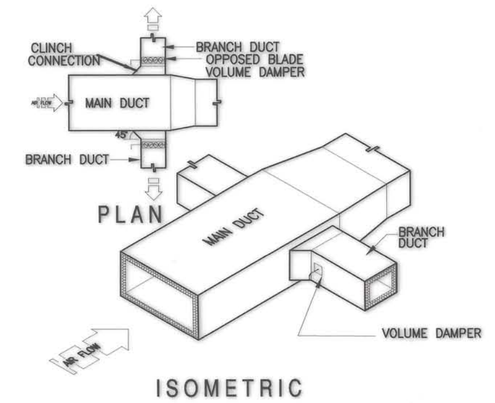
NOTE :
1. FOR A/C & VENTILATION, MAX HANGER SPACING SHALL BE 1500 MM. PROVIDE 32X32X4MM STL ANGLE DUCT SUPPORT. FOR KITCHEN EXHAUST, MAX SPACING SHALL BE 1000 MM. PROVIDE 50X50X6 MM STL ANGLE DUCT SUPPORT.
2. ANGLE BAR SUPPORT SHALL CONFORM WITH SMACNA 5TH EDITION, TABLE 5-3.
3. HANGER ROD SHALL CONFORM WITH SMACNA 5TH EDITION, TABLE 5-1.

20 ME — DUCT HANGER DETAIL
SCALE: NTS

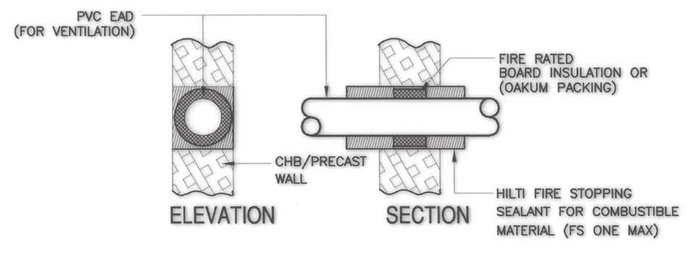


NOTE:
1. CONDENSER COIL FINS SHALL BE TREATED WITH ANTI–SALT SPRAY CORROSION COATING.
2. AIR–COOLED CONDENSING UNIT SHALL BE EPOXY COATED.
3. FOR WALL MOUNTED UNIT VERIFY TO STRUCTURAL

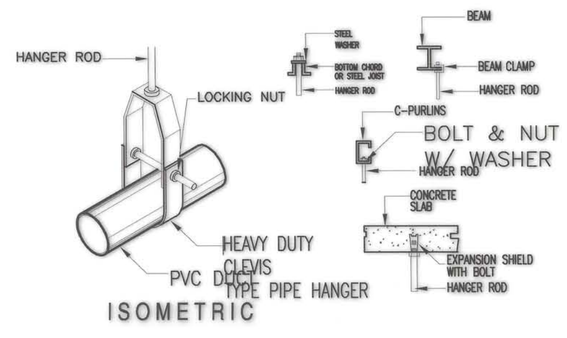
21 ME — ACCU FLOOR MOUNTED DETAIL
SCALE: NTS



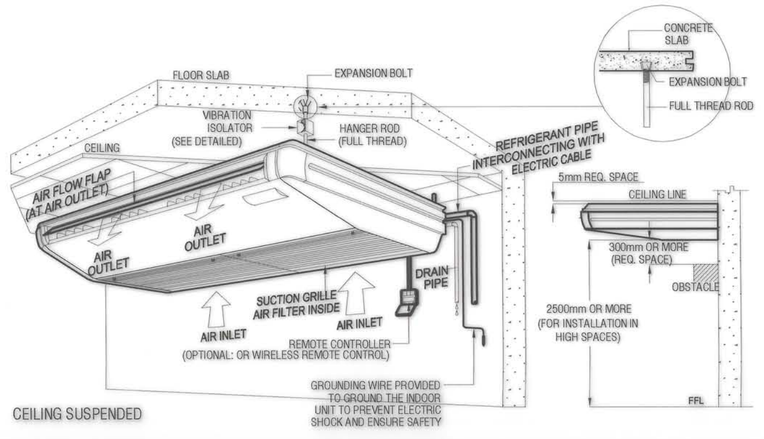
22 ME — TYPICAL BRANCH DUCT TAKE-OFF
SCALE: NTS



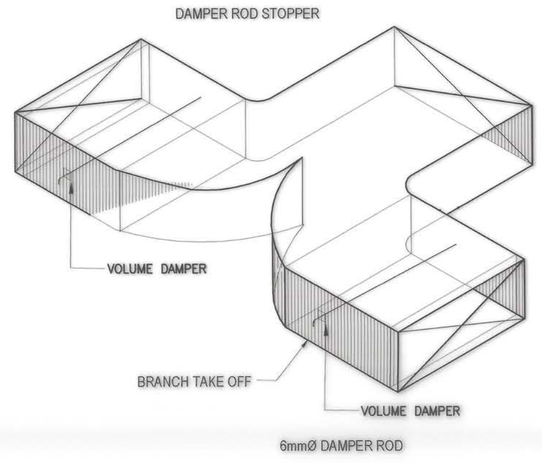
23 ME — PVC PIPE THRU WALL DETAIL
SCALE: NTS



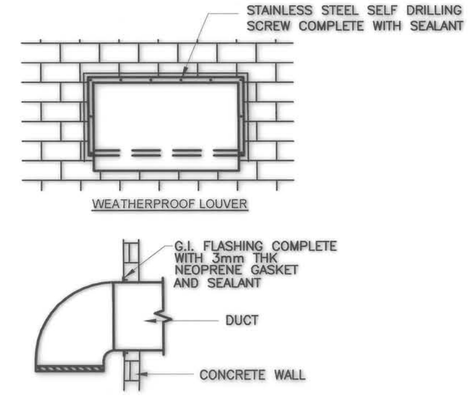
24 ME — SPIRAL DUCT HANGER DETAIL
SCALE: NTS



25 ME — FAN COIL UNIT MOUNTING DETAILS
SCALE: NTS



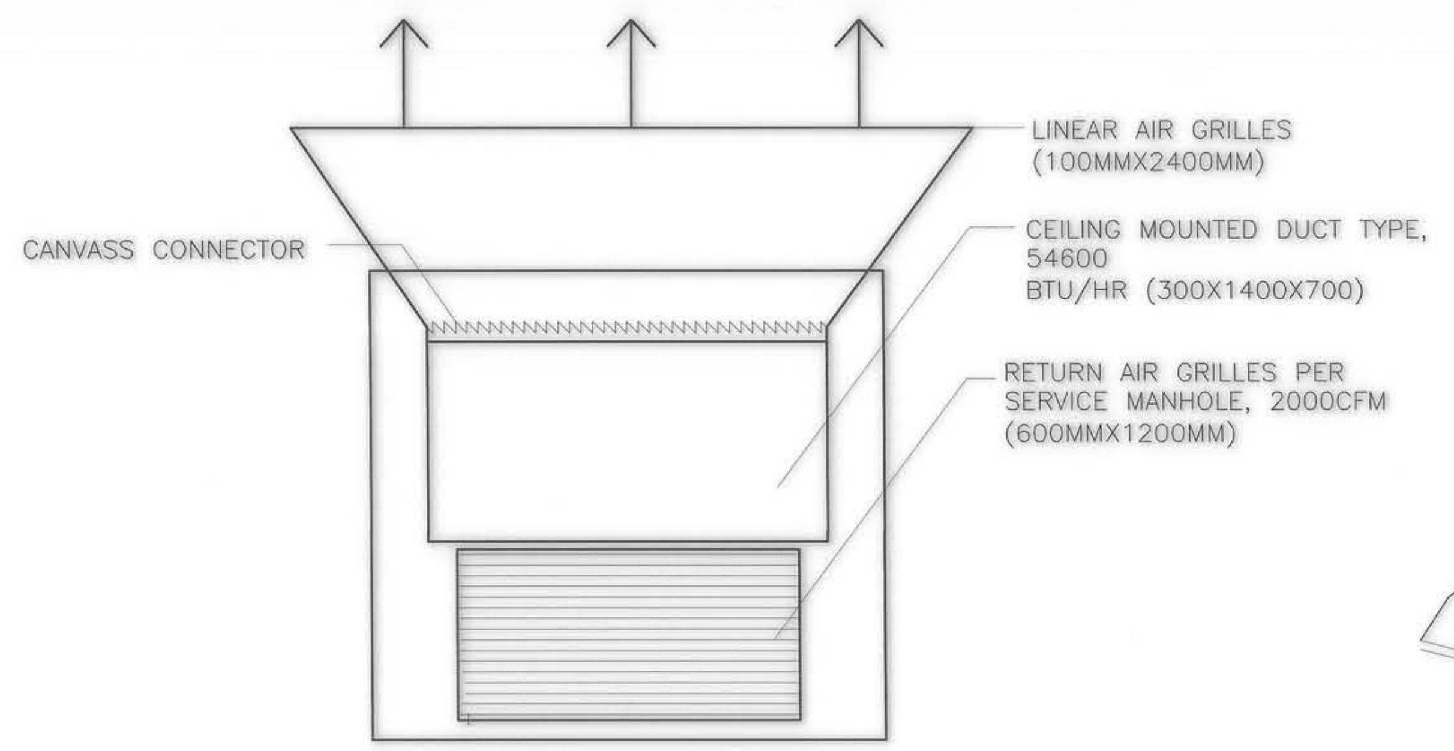
26 ME — BRANCH TAKE OFF DETAIL
SCALE: NTS



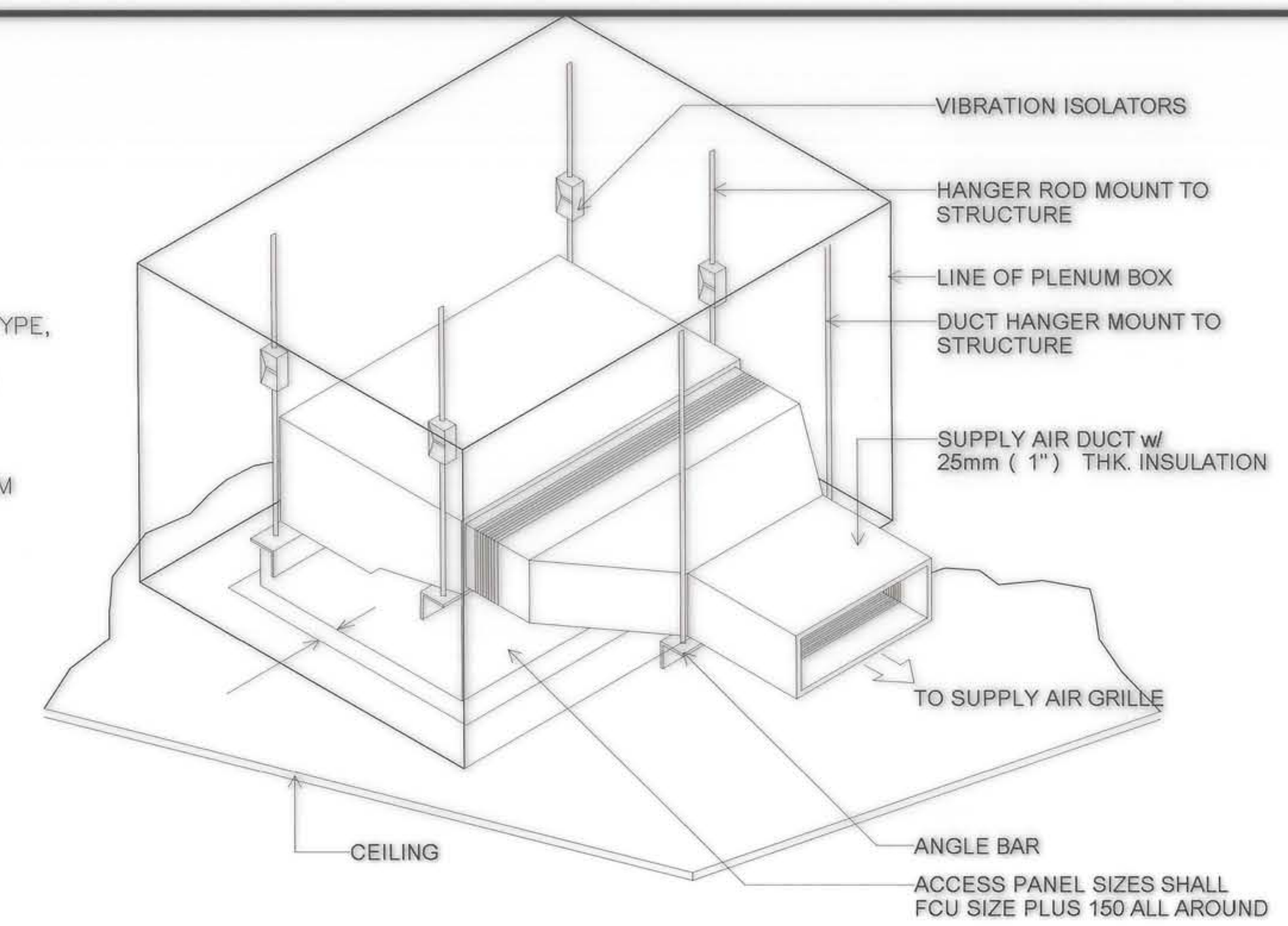
27 ME — LOUVER MOUNT TO WALL DETAIL
SCALE: NTS

OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:
BCDA Bases Conversion and Development Authority — VIVENCIO B. DIZON, PRESIDENT AND MTD Clarke Inc. — PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION — ZOILO S. DELA CRUZ, VICE PRESIDENT—OPERATION REG No.: 0022457 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION, Architectural & Engineering Consultants — ALFREDO R. REVILLA, PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. — ISAAC S. DAVID, PRESIDENT

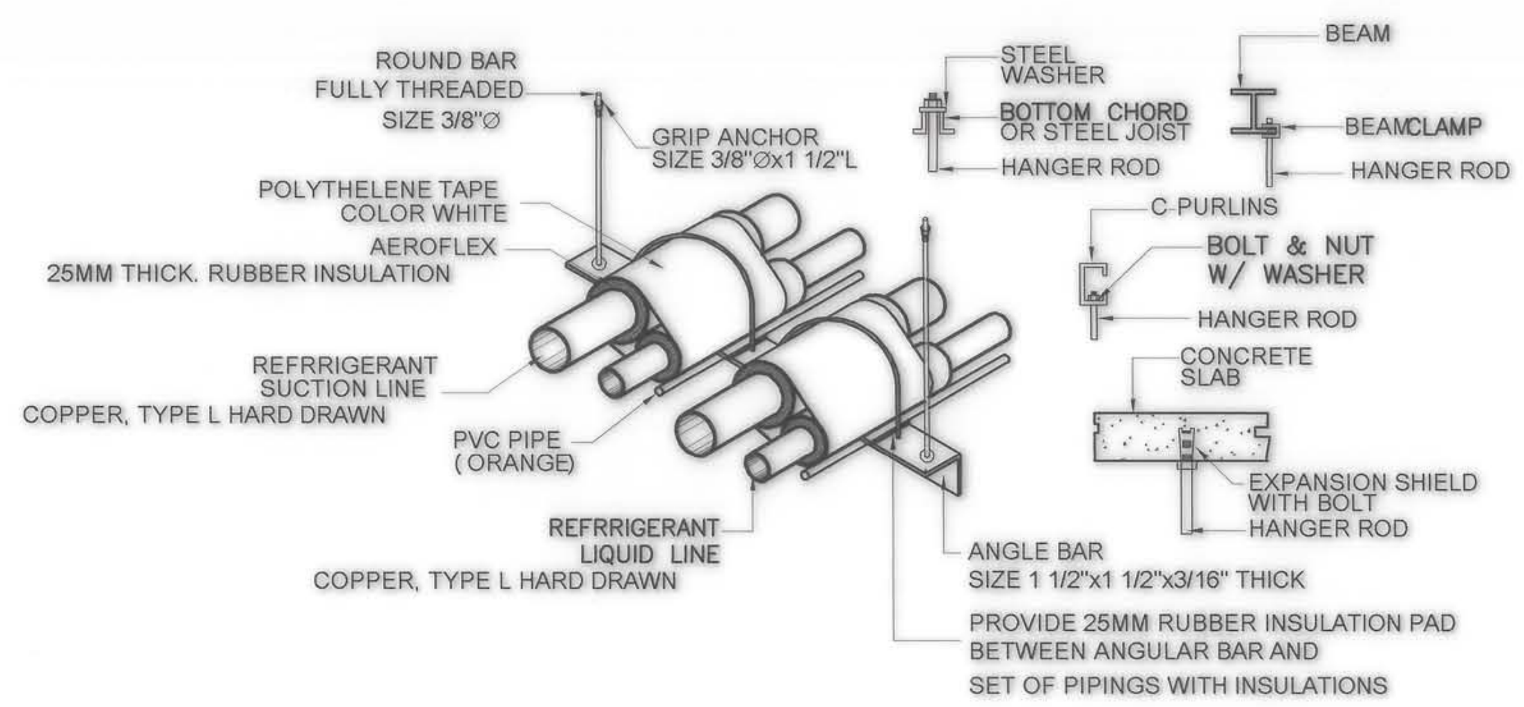
CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
TCGI ENGINEERS — VIRGILIO A. MADRAZO, PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	MISCELLANEOUS DETAILS 02	M-36



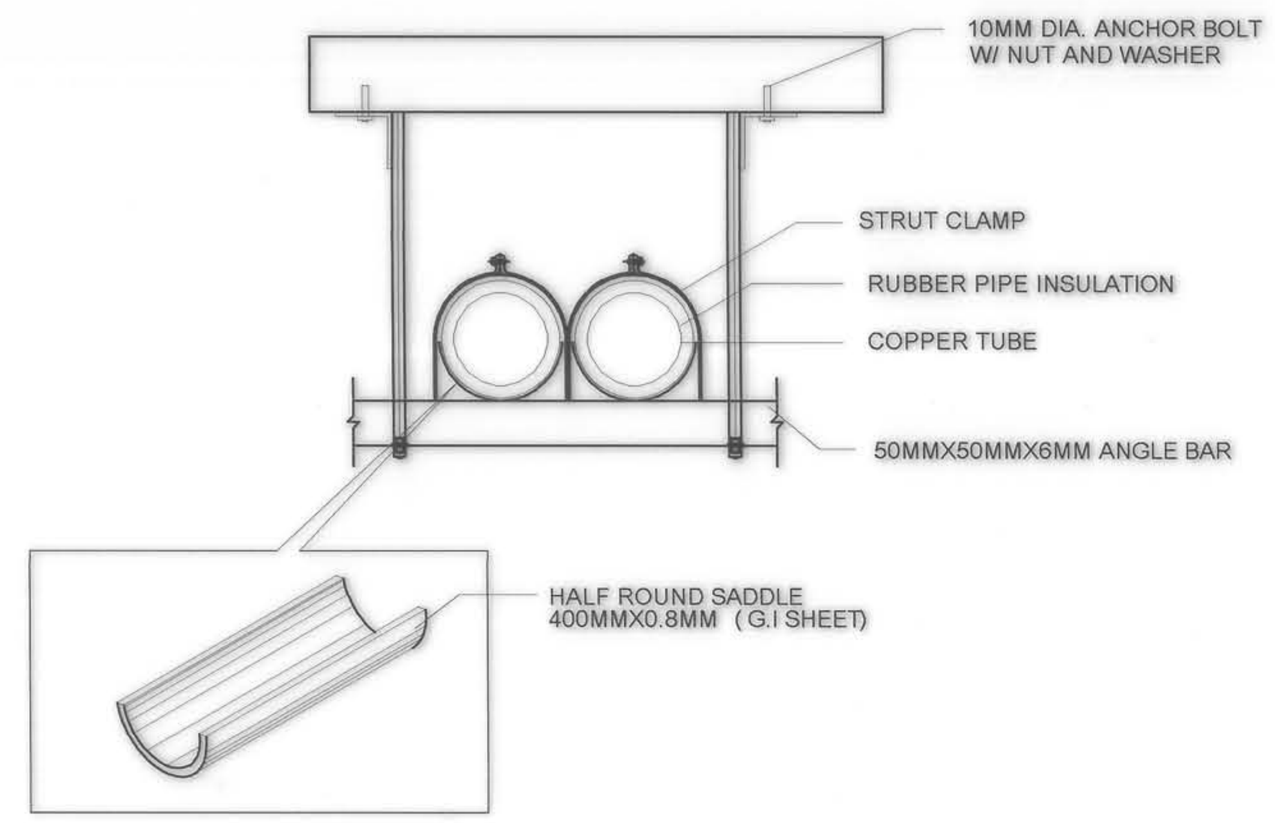
28 ME — FAN COIL UNIT PLENUM BOX DETAIL
SCALE: NTS



29 ME — FAN COIL MOUNTING UNIT DETAIL
SCALE: NTS



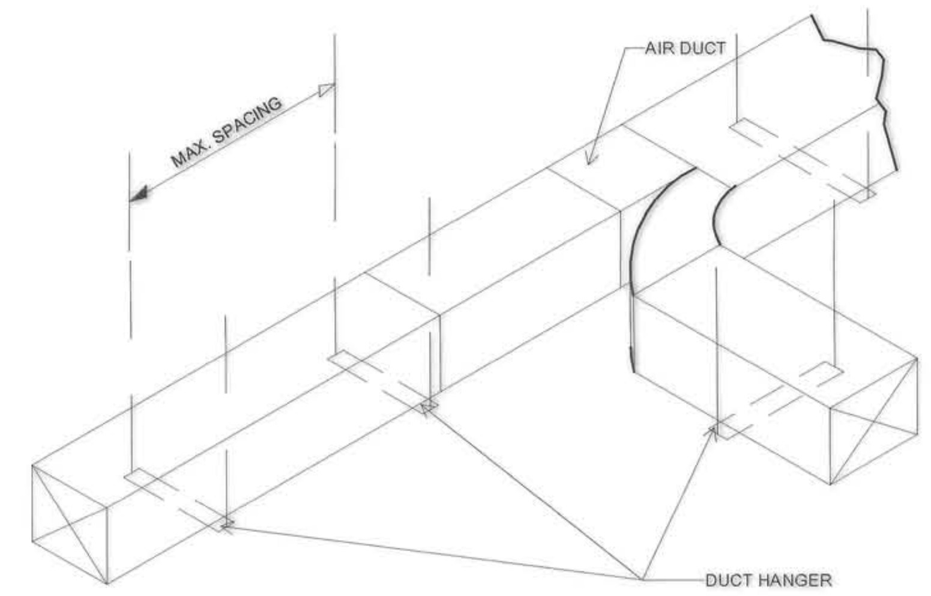
30 ME — DETAIL OF HANGERS, REFRIGERANT PIPE AND RUBBER INSULATION
SCALE: NTS



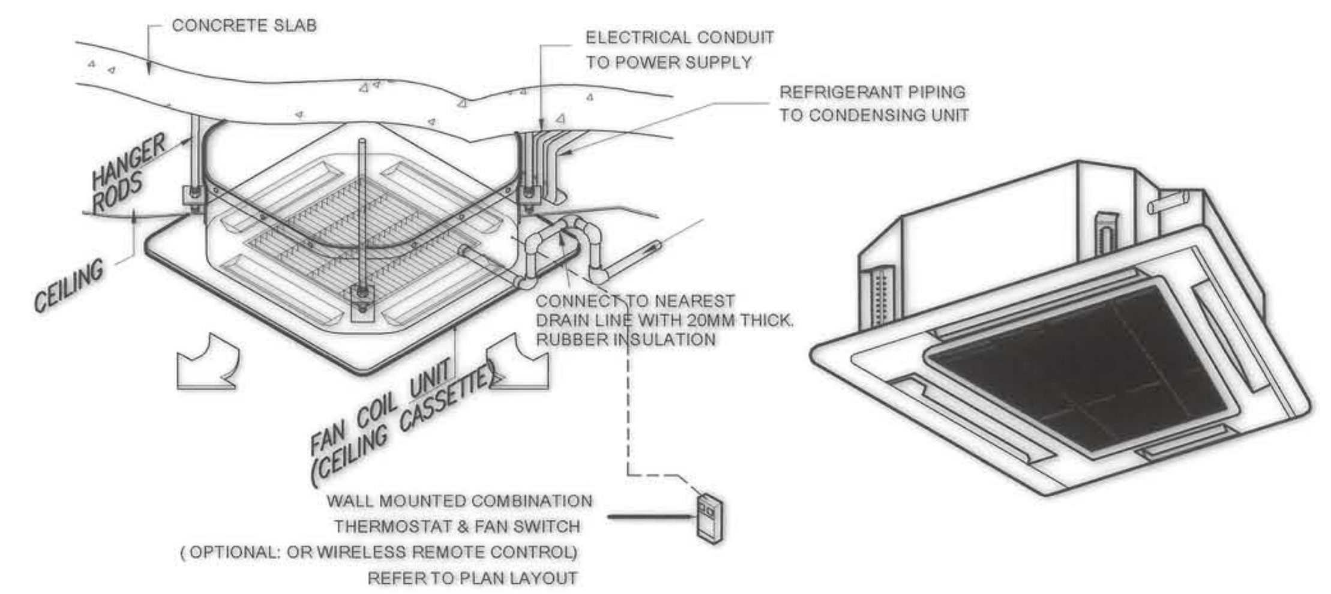
31 ME — OTHER DETAILED INSTALLATION OF REFRIGERANT PIPE AND INSULATION
SCALE: NTS

SCHEDULE OF DUCT GAGE AND HANGERS

DIMENSION LONGEST SIDE (mm)	G.I. SHEET Ga. No.	SIZE OF ANGLE SUPPORT (mm)	DISTANCE BETWEEN HANGERS (mm)	MIN SIZE OF STEEL ROD HANGER (mm Ø)
UP TO 300	26	25 x 25 x 3	1200	10
325 TO 750	24	38 x 38 x 5	1200	12
785 TO 1500	22	38 x 38 x 5	2000	12
1550 TO 2285	20	38 x 38 x 5	2000	12
2310 UP	18	38 x 38 x 5	2000	12

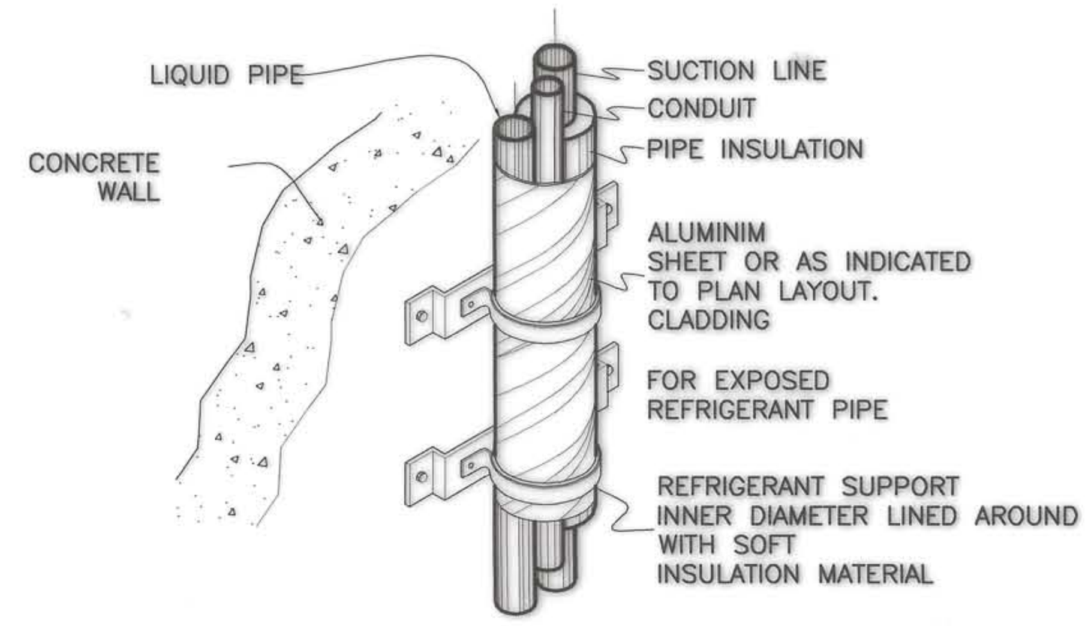


32 ME — DUCT SCHEDULE AND NOTES
SCALE: NTS



CEILING CASSETTE

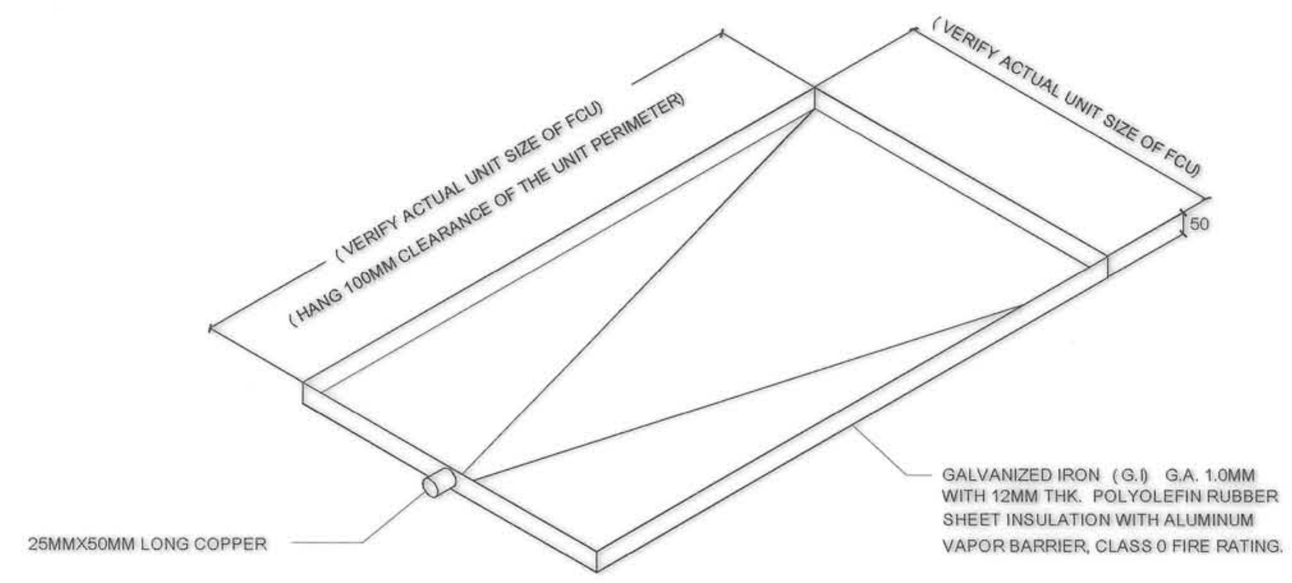
33 ME — DETAILED INSTALLATION OF CASSETTE UNIT
SCALE: NTS



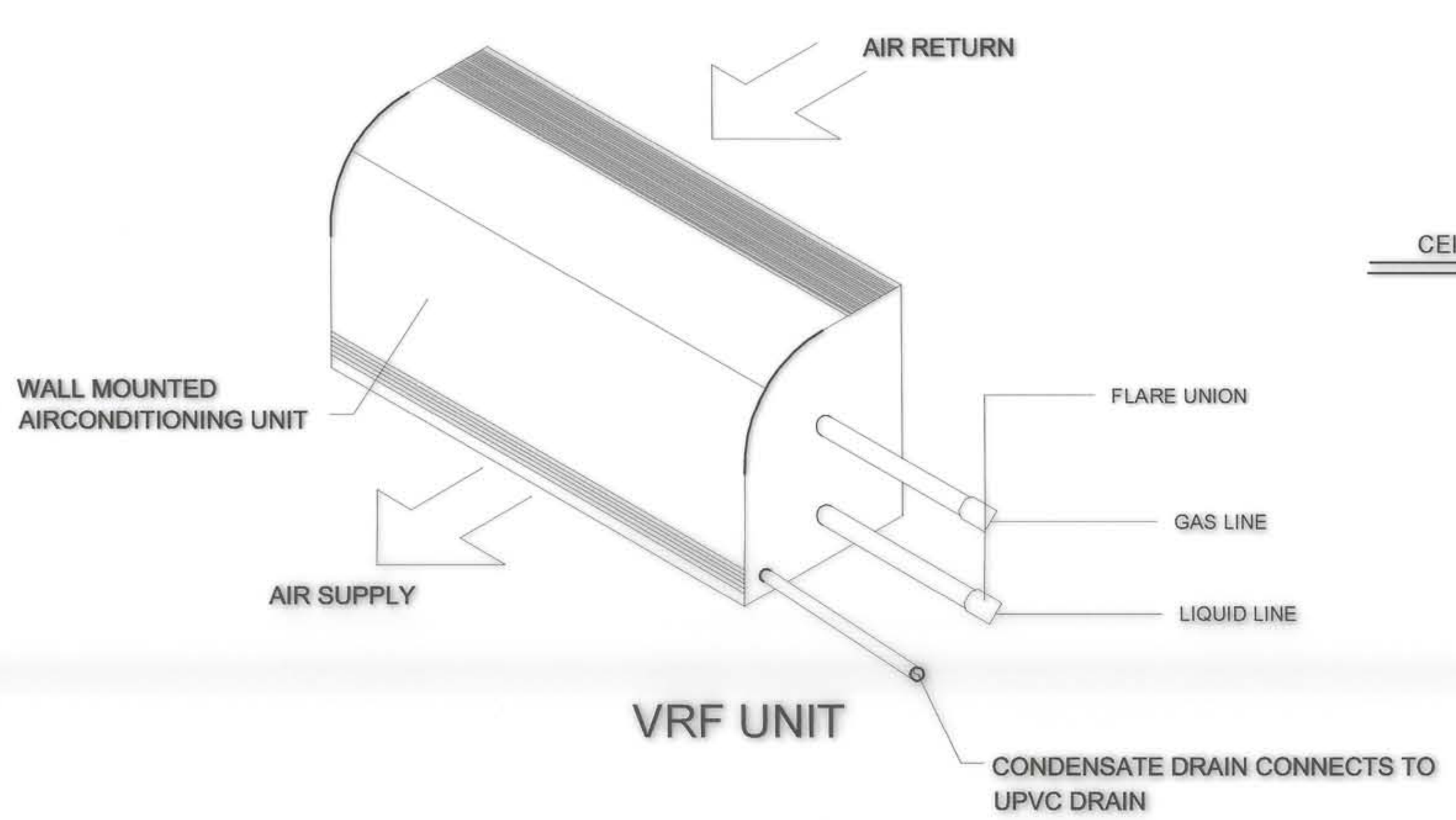
34 ME — REFRIGERANT PIPE RISER DETAIL
SCALE: NTS

NOTES:

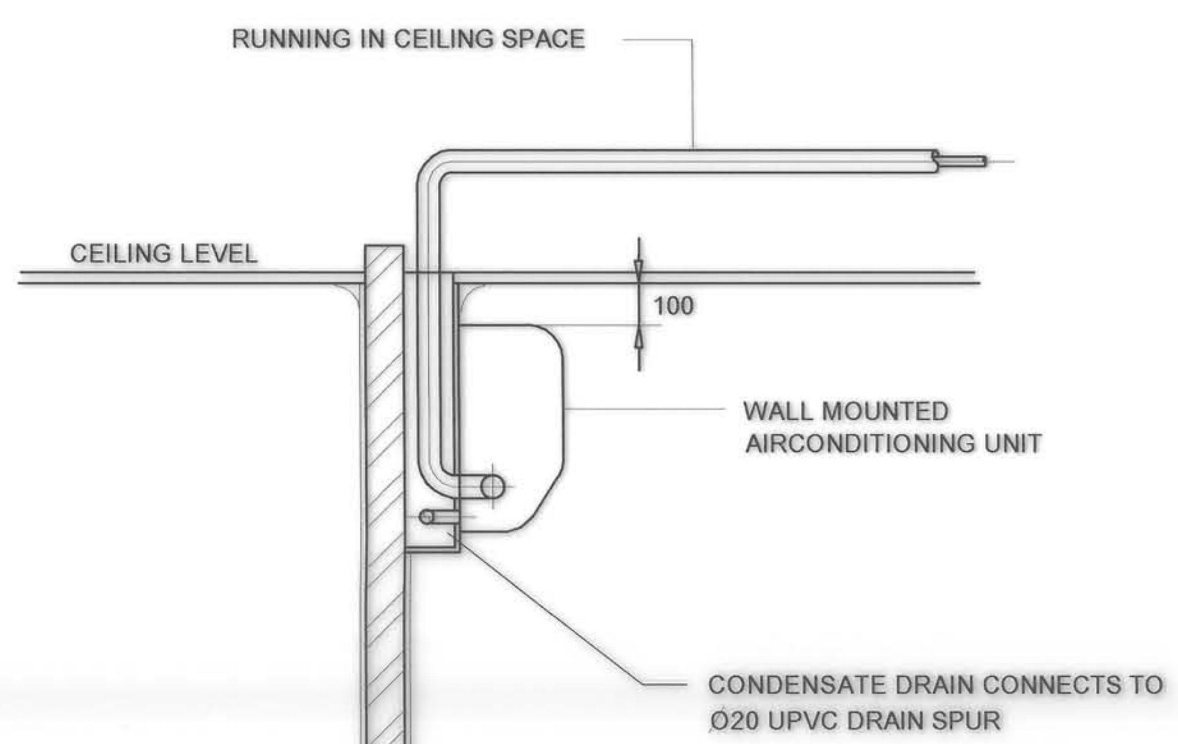
1) CONDENSATE DRAIN WITH 25MM THK RUBBER INSULATION FOR THE FIRST 3M.
2) INSTALL SECONDARY DRIP TRAY TO ALL CEILING CONCEALED DUCTED FAN COIL UNIT OR AIR HANDLING UNIT.



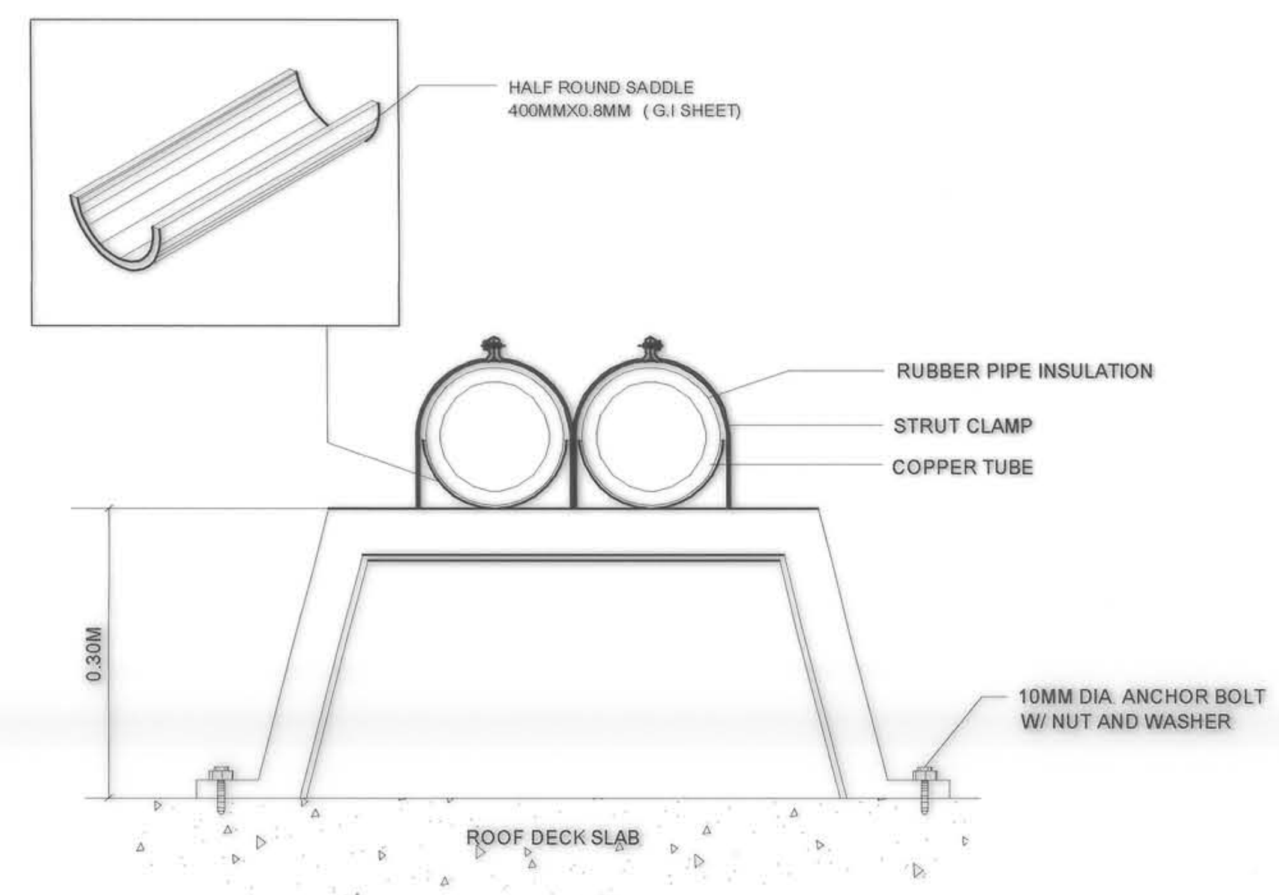
35 ME — DETAIL OF SECONDARY SAFETY DRIP TRAY
SCALE: NTS



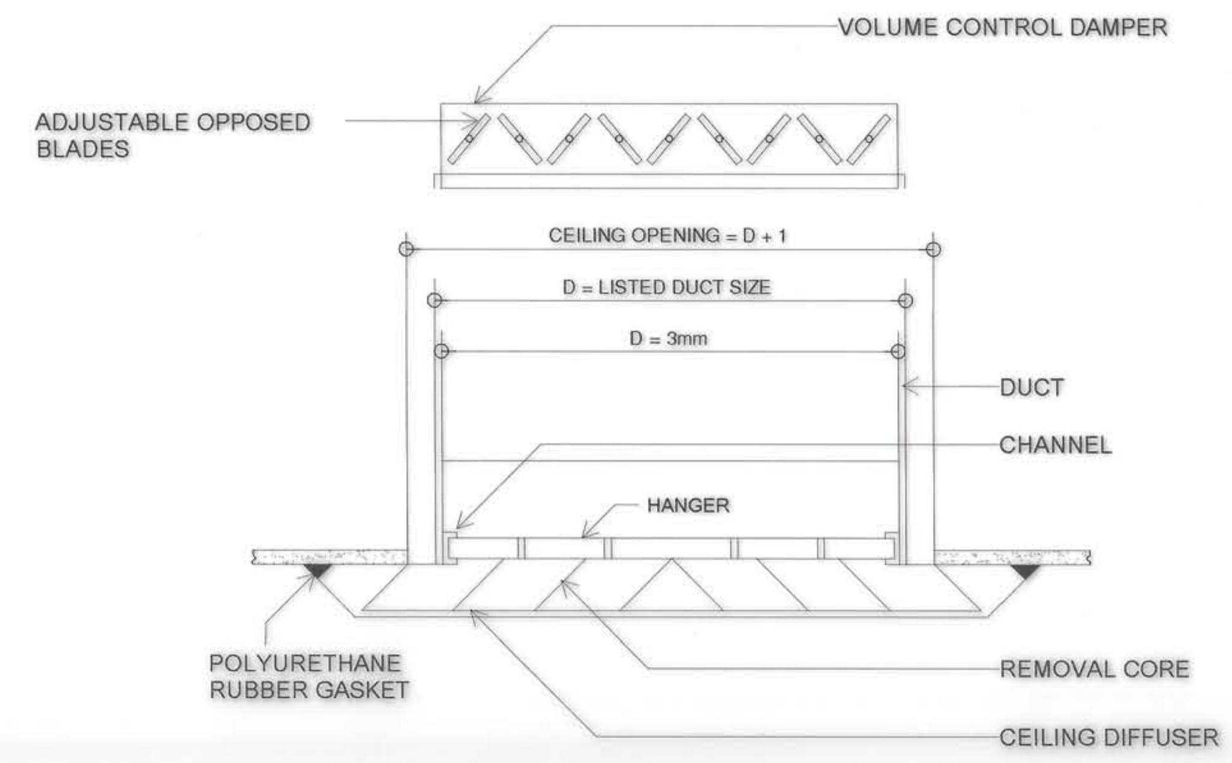
VRF UNIT



36 ME — PIPING HOOK-UP DETAIL FOR FCU'S AND COOLING COILS
SCALE: NTS



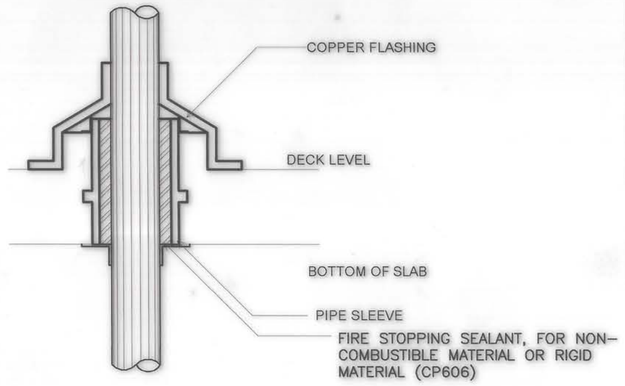
37 ME — DETAILED INSTALLATION OF ROOF DECK REFRIGERANT PIPE AND INSULATION
SCALE: NTS



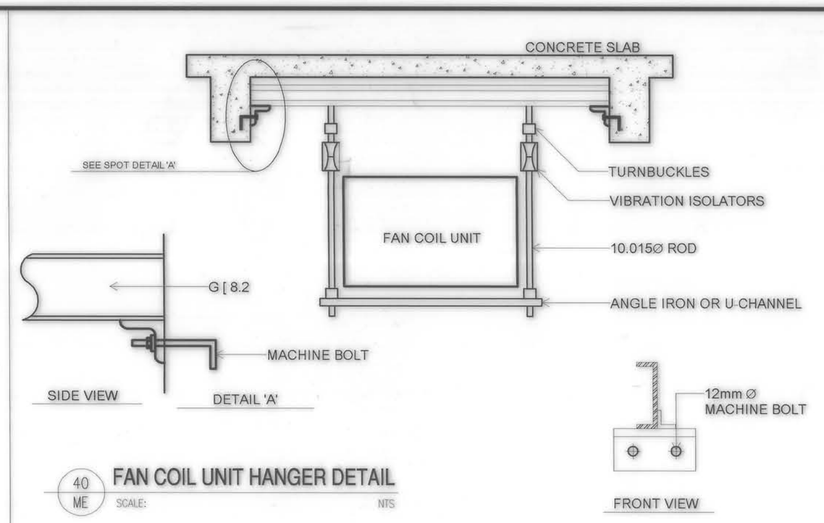
V. DIFFUSER DETAIL

38 ME — DETAILED INSTALLATION OF ROOF DECK REFRIGERANT PIPE AND INSULATION
SCALE: NTS

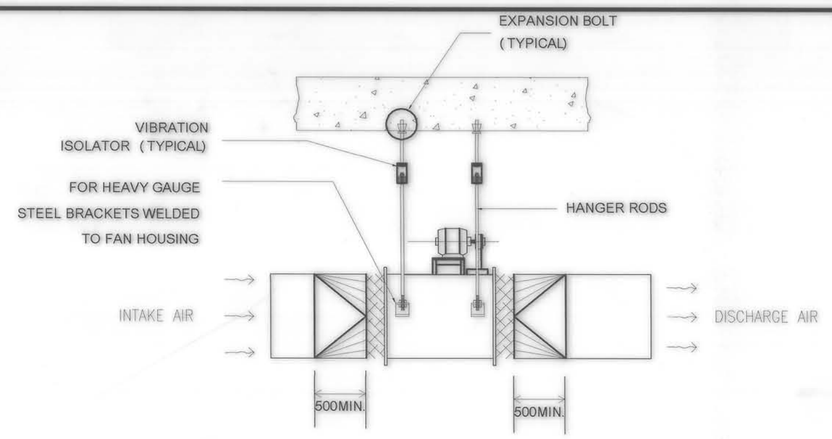
OWNER : NGAC PHASE I JV COMPANY	PREPARED BY:	REVIEWED AND VALIDATED BY:	SUBMITTED BY:	CERTIFIED BY: INDEPENDENT CONSULTANT	PROJECT TITLE:	SHEET CONTENTS:	SHEET NO.
BCDA AND MTD VIVENCIO B. DIZON, PRESIDENT PATRICK NICHOLAS P. DAVID, PRESIDENT	FREY-FIL CORPORATION ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 0022657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO B. REVILLA PROJECT MANAGER	BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	MISCELLANEOUS DETAILS 03	M-37



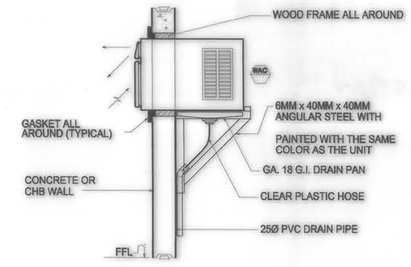
39 ME — **PIPE THRU DECK DETAILS** SCALE: NTS



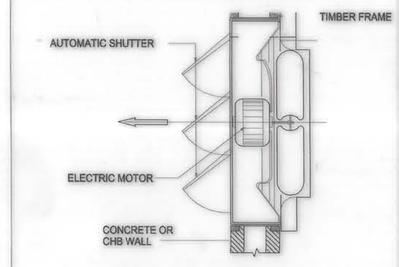
40 ME — **FAN COIL UNIT HANGER DETAIL** SCALE: NTS



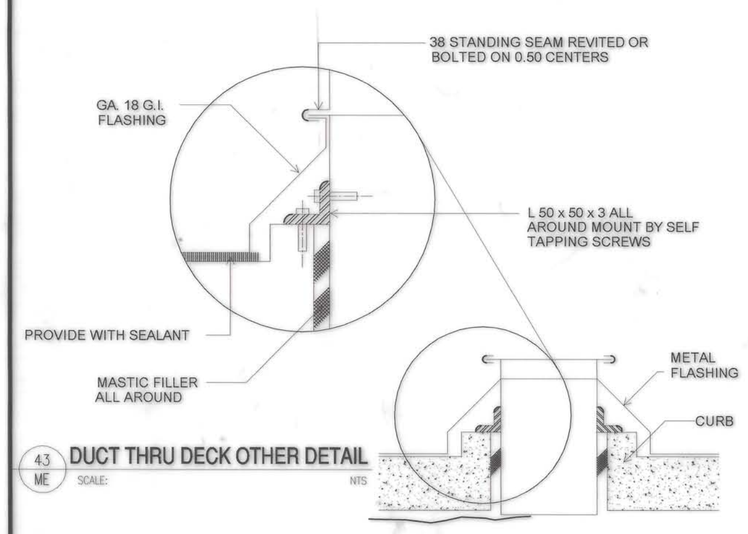
41 ME — **INLINE DUCTED CENTRIFUGAL FAN** SCALE: NTS



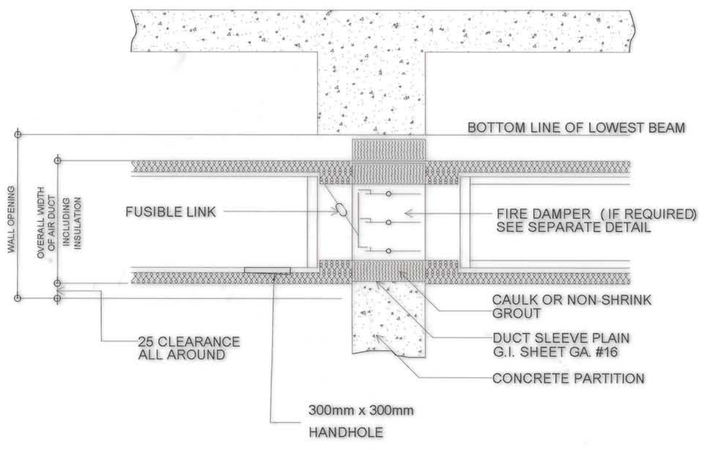
53 ME — **TYPICAL WINDOW TYPE MOUNTING DETAIL** SCALE: NTS



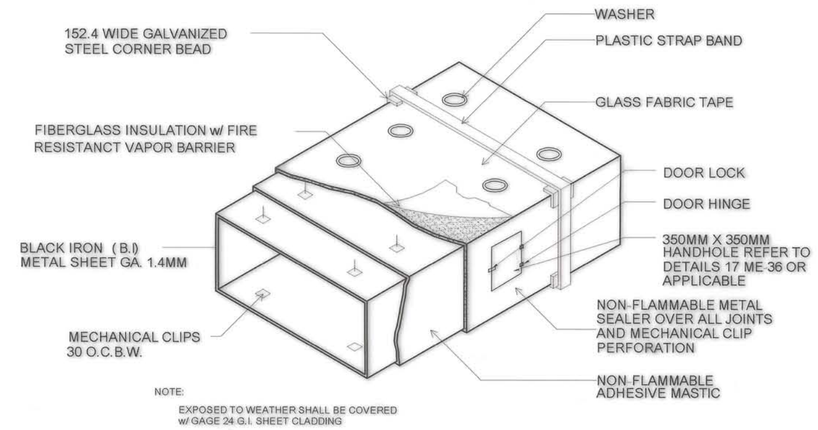
54 ME — **WALL PROFELLER FAN DETAIL** SCALE: NTS



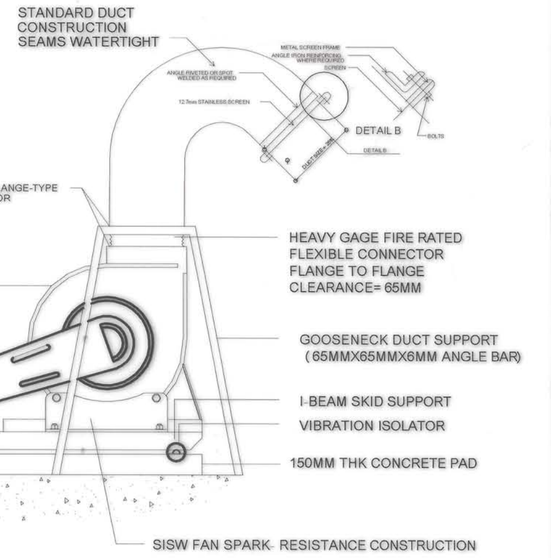
43 ME — **DUCT THRU DECK OTHER DETAIL** SCALE: NTS



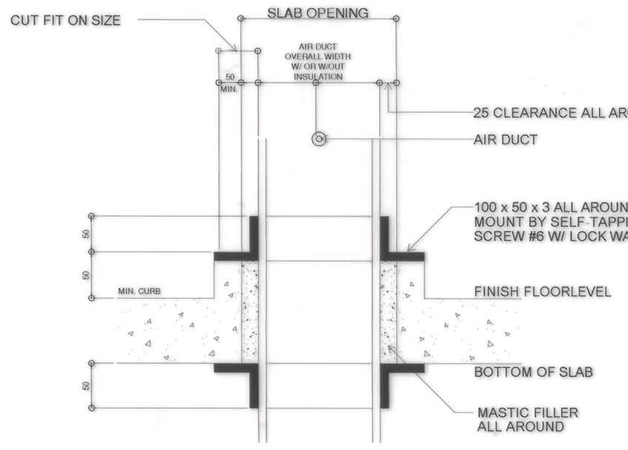
44 ME — **TYPICAL DUCT THRU-WALL OTHER DETAIL** SCALE: NTS



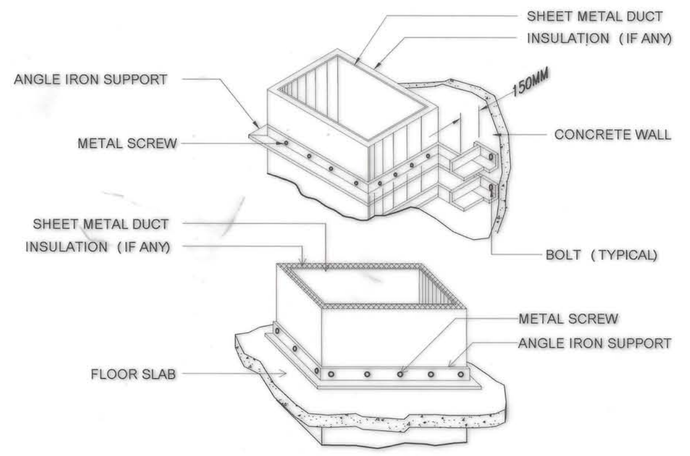
45 ME — **DETAILED INSULATION OF KITCHEN EXHAUST DUCT** SCALE: NTS



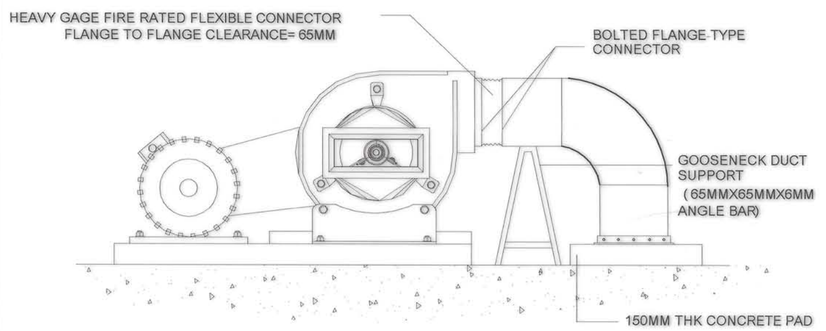
46 ME — **DETAILED INSTALLATION OF KITCHEN EXHAUST BLOWER** SCALE: NTS



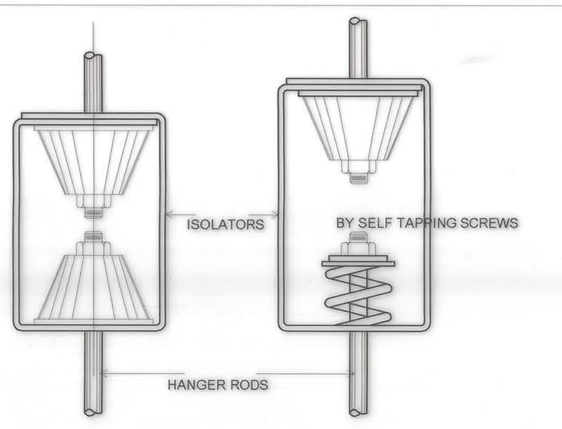
47 ME — **TYPICAL DUCT THRU SLAB DETAIL** SCALE: NTS



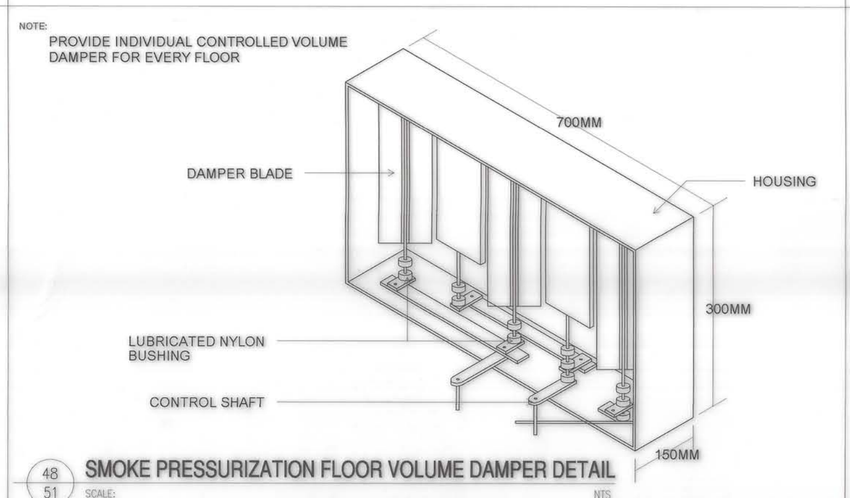
48 ME — **VERTICAL DUCT HANGER DETAIL** SCALE: NTS



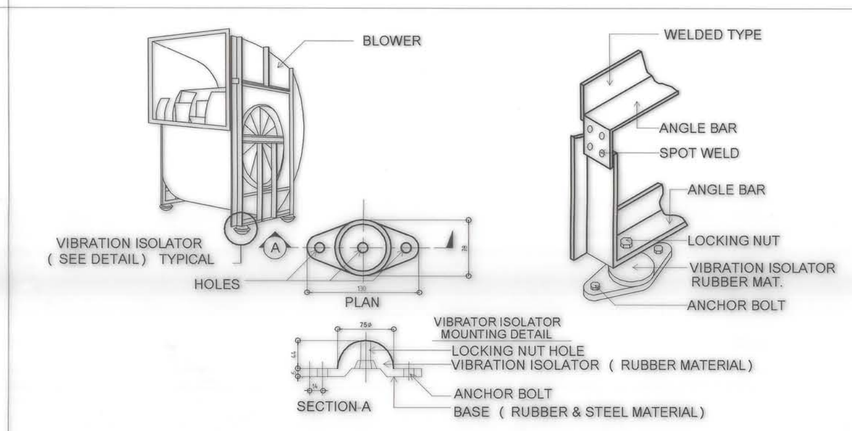
49 ME — **OTHER DETAILED INSTALLATION OF PRESSURIZATION/KITCHEN FRESH AIR BLOWER** SCALE: NTS



50 ME — **ISOLATION HANGER DETAIL** SCALE: NTS



48 51 ME — **SMOKE PRESSURIZATION FLOOR VOLUME DAMPER DETAIL** SCALE: NTS



52 ME — **BLOWER AND VIBRATION ISOLATOR MOUNTING DETAIL** SCALE: NTS

OWNER : NGAC PHASE I JV COMPANY BCDA Bases Conversion and Development Authority — AND — MTD Clark VIVENCIO B. DIZON, PRESIDENT — PATRICK NICHOLAS P. DAVID, PRESIDENT	PREPARED BY: FREY-FIL CORPORATION ZOILO S. DELA CRUZ VICE PRESIDENT-OPERATION REG No.: 092657 PTR No: 8118498 TIN No.: 116-426-274 PLACE: MANILA DATE: 01.20.2019	REVIEWED AND VALIDATED BY: FILIPINAS DRAVO CORPORATION Architectural & Engineering Consultants ALFREDO R. REVILLA PROJECT MANAGER	SUBMITTED BY: BANDAR HEBAT BUILDERS, INC. ISAAC S. DAVID PRESIDENT	CERTIFIED BY: INDEPENDENT CONSULTANT TCGI ENGINEERS VIRGILIO A. MADRAZO PRESIDENT/CEO	PROJECT TITLE: AS-BUILT DRAWING NGAC PHASE 1A ATHLETES VILLAGE (AIR CONDITIONING & VENTILATION SYSTEM) New Clark City, Capas, Tarlac	SHEET CONTENTS: MISCELLANEOUS DETAILS 04	SHEET NO. M-38