



31st Oct, 2024

TENDER NOTICE

1. The **GASABO GOLD REFINERY LTD** hereby invites Interested and competent bidders for the execution works of the **Construction of staff offices and dining hall**
2. Bidding will be conducted through **Open Competitive Bidding** and is open to all eligible bidders,
3. Interested eligible bidders may obtain further information from below address;

Gasabo Gold Refinery Ltd (GGR)
Kigali Special Economic Zone, Phase II
Procurement office e-mail; dan.ngoga@ggr.co.rw,
Tel; 0738647061/0788647061.

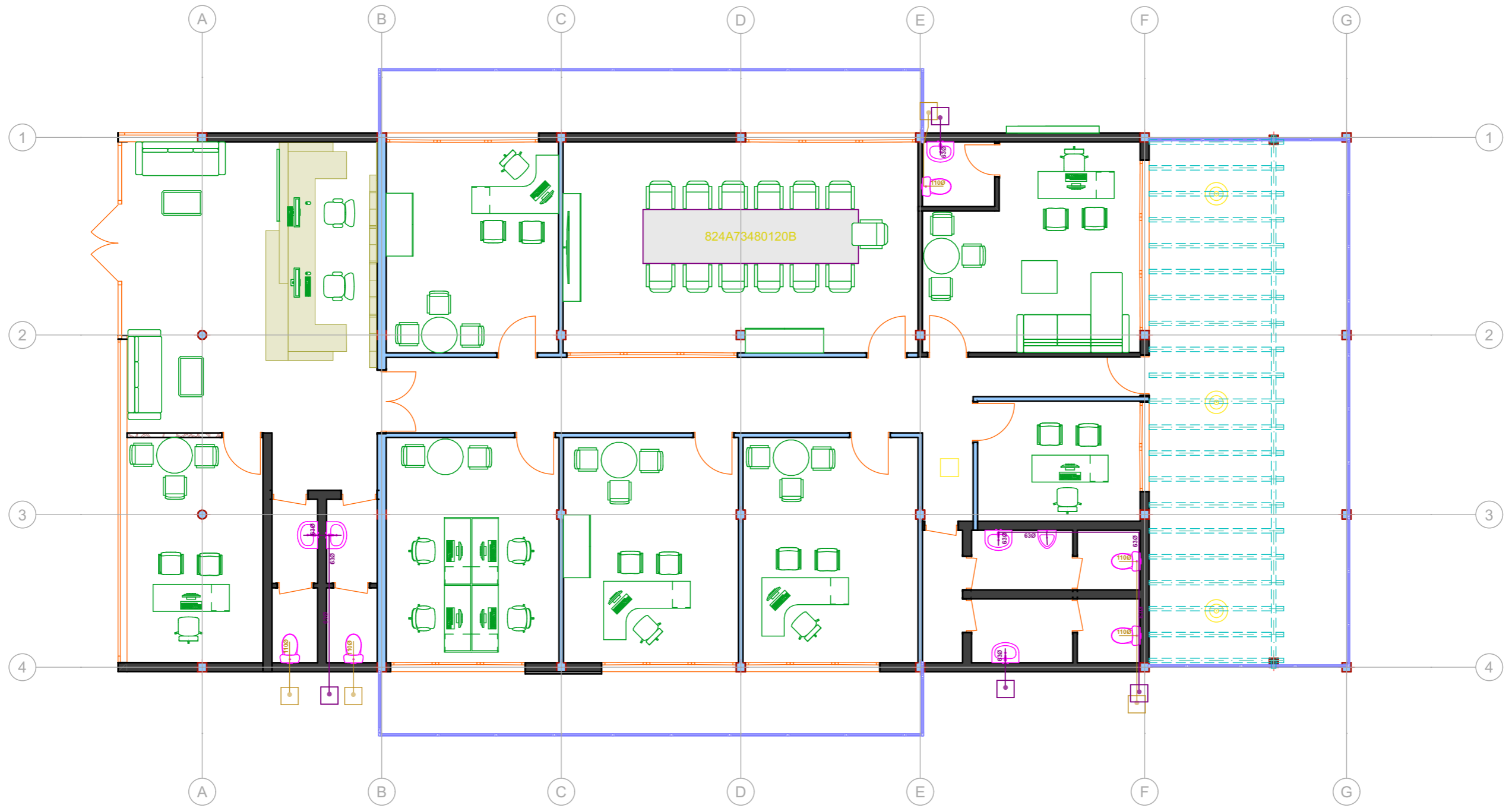
5. A compulsory site visit is necessary and will be conducted at **Gasabo Gold Refinery Ltd head office located at Kigali Special Economic Zone (Phase II) on 07/11/2024 10:30am**
6. Well typed bids, suitably bound, written in English in 2 copies, including 1 (one) original and 1 (one) copy, clearly marked, shall be received in sealed envelopes at the **Gasabo Gold Refinery procurement office, not later than 14/11/2024, at 10:00 am** local time. Bids will be opened physically in the presence of the bidders or their representatives who choose to attend on **the same day at 10:10am.**
7. Late bids will be rejected.
8. Tender documents detailing the requirements of the above tender may be obtained from GGR website www.ggr.co.rw

A handwritten signature in blue ink, appearing to read "Bosco Kayobotsi", is written over a dotted line.



Bosco KAYOBOTSIP.O.Box: 4551 Kigali-Rwanda

Managing Director



FIRST FLOOR PLUMBING EVACUATION PLAN



Goldstone construction .Ltd
 Avenue du commerce
 Kigali city tower 14th & 15th floor
 tel: +250 788 483 502/ 788 394 552
 PO.BOX: 6428

PROJECT: OFFICE BUILDING CONSTRUCTION
 CLIENT: GASABO GOLD REFINERY. LTD
 ADDRESS
 Gasabo DISTRICT
 kigali city
RWANDA

Modified by
Eng. HARERIMANA Yannick

24-09-2024

Checked by

24-09-2024

Drawing Name
PLUMBING EVACUATION FIRST FLOOR PLAN

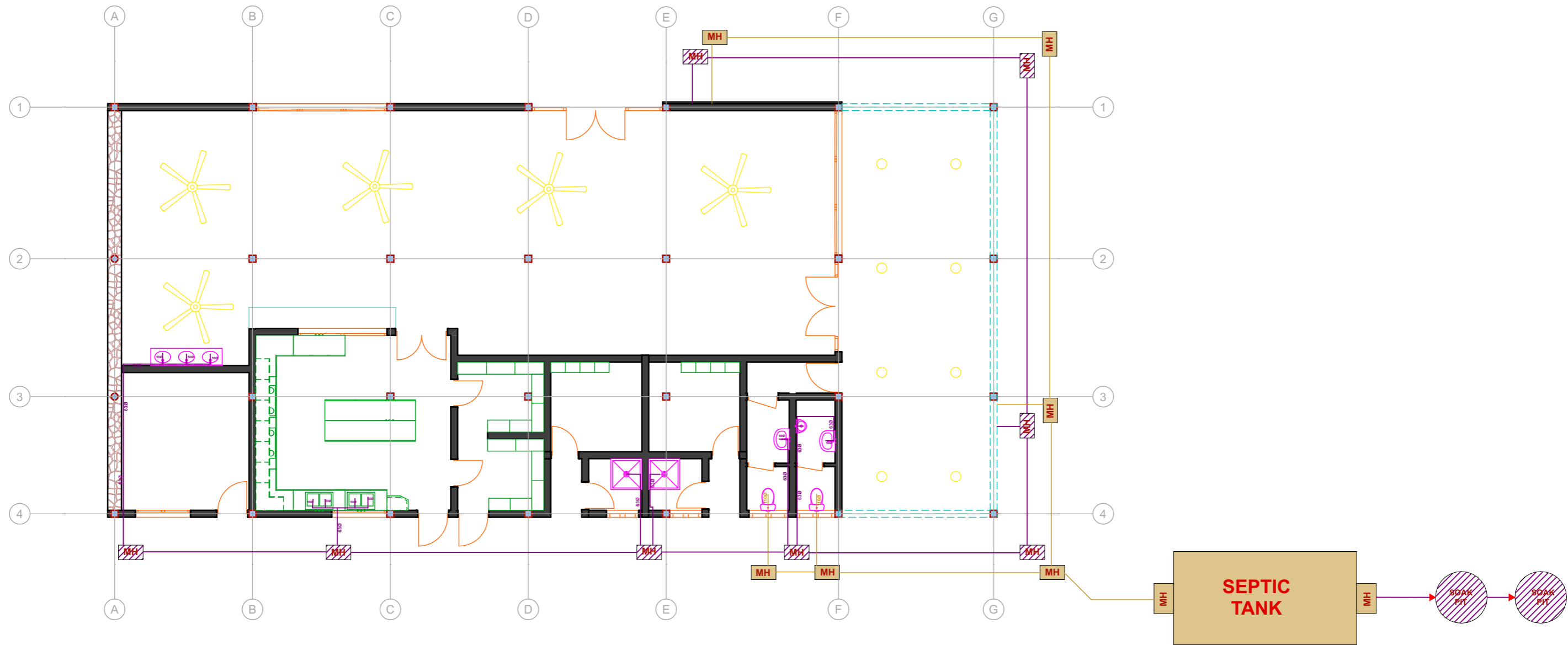
FLOOR PLAN

Drawing Scale

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Layout ID
#LayID

Revision
#ReVID



GROUND FLOOR PLUMBING EVACUATION PLAN



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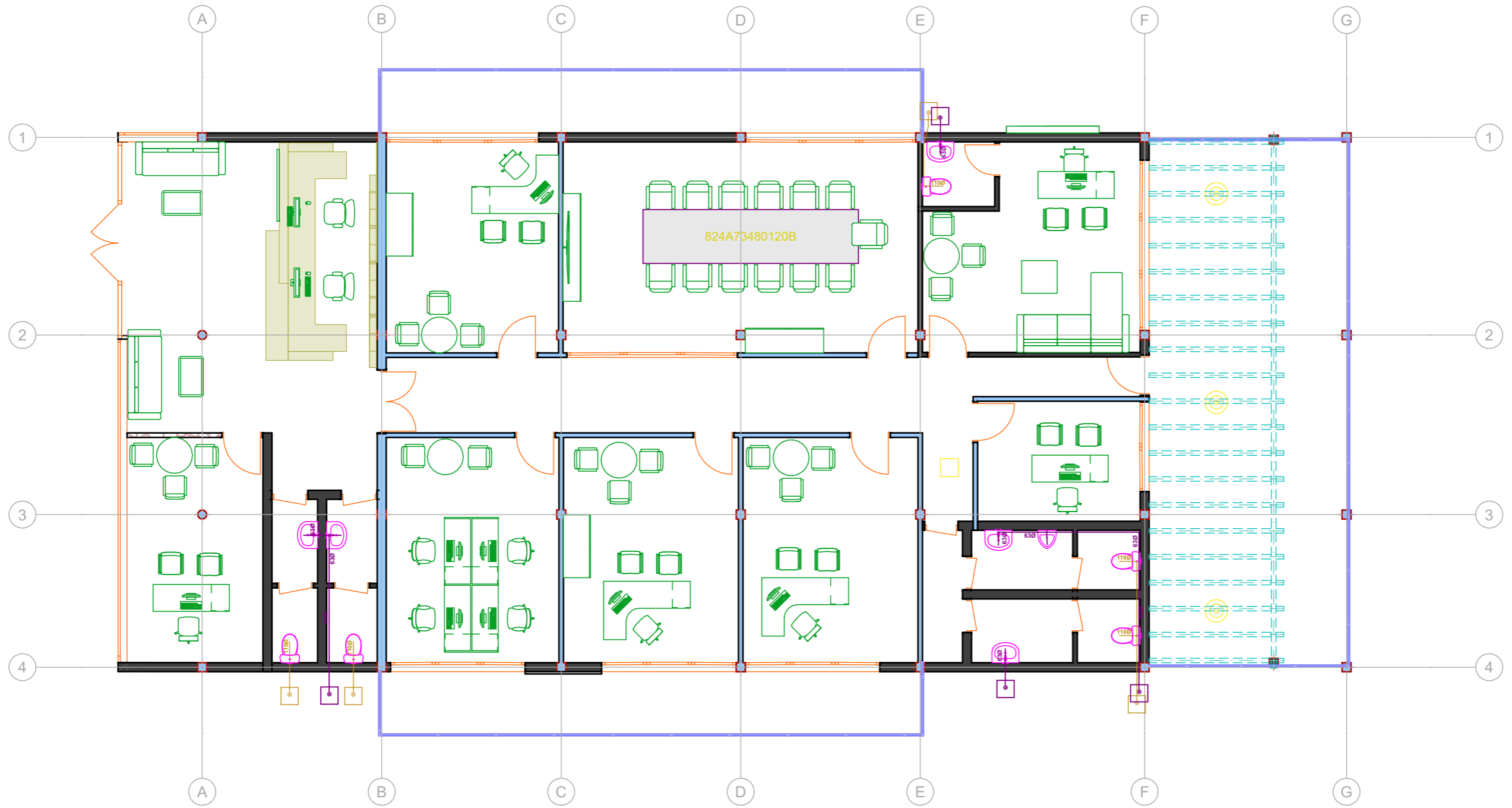
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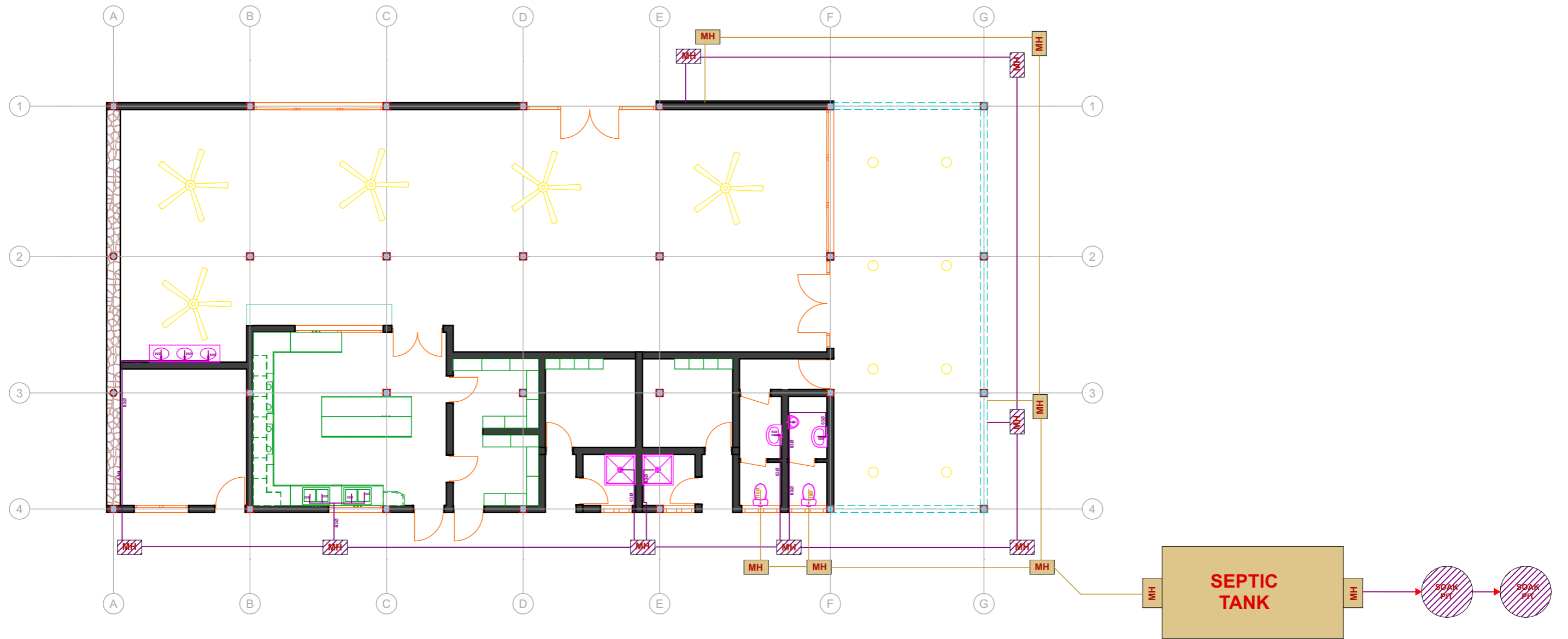
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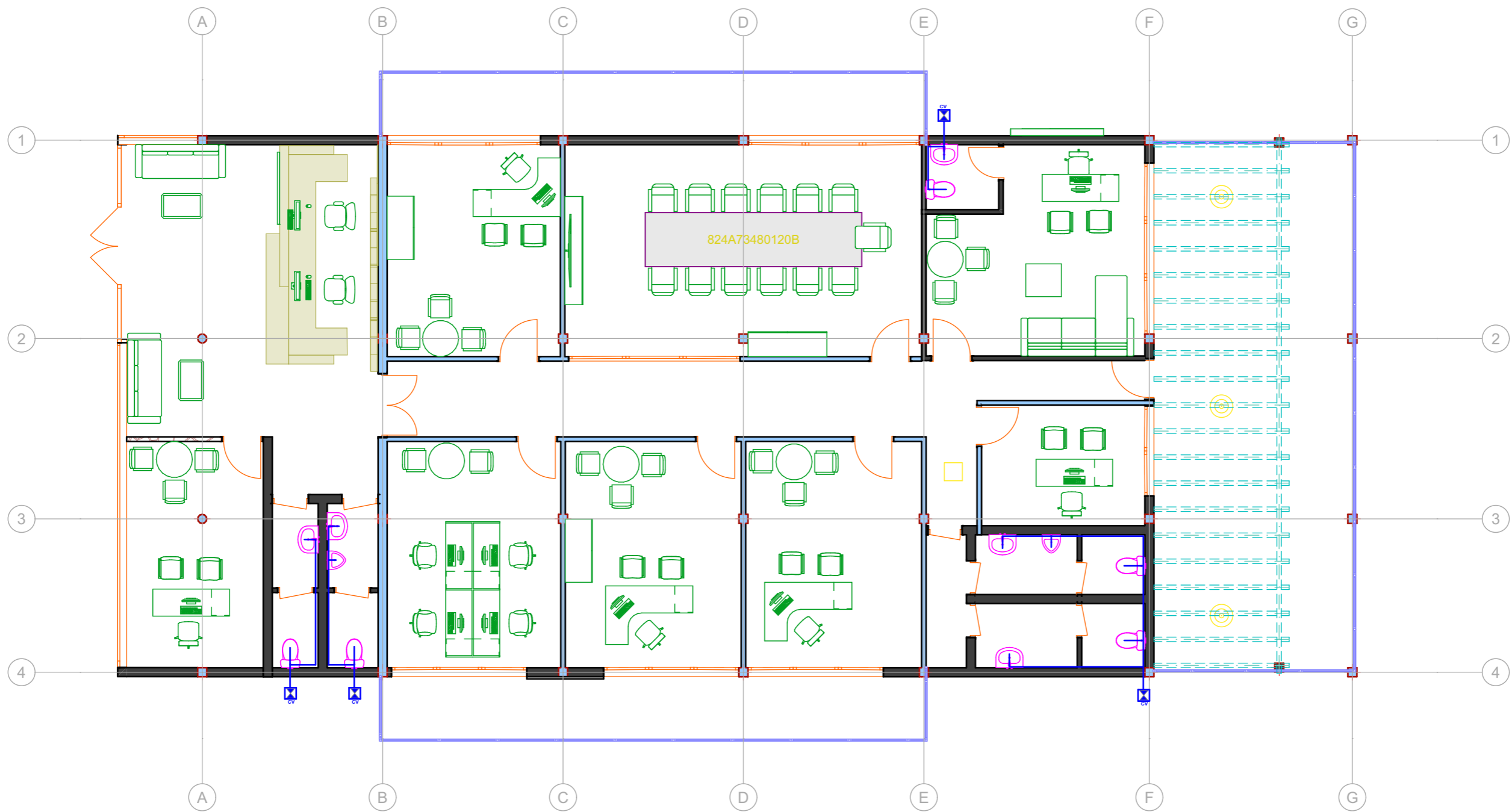
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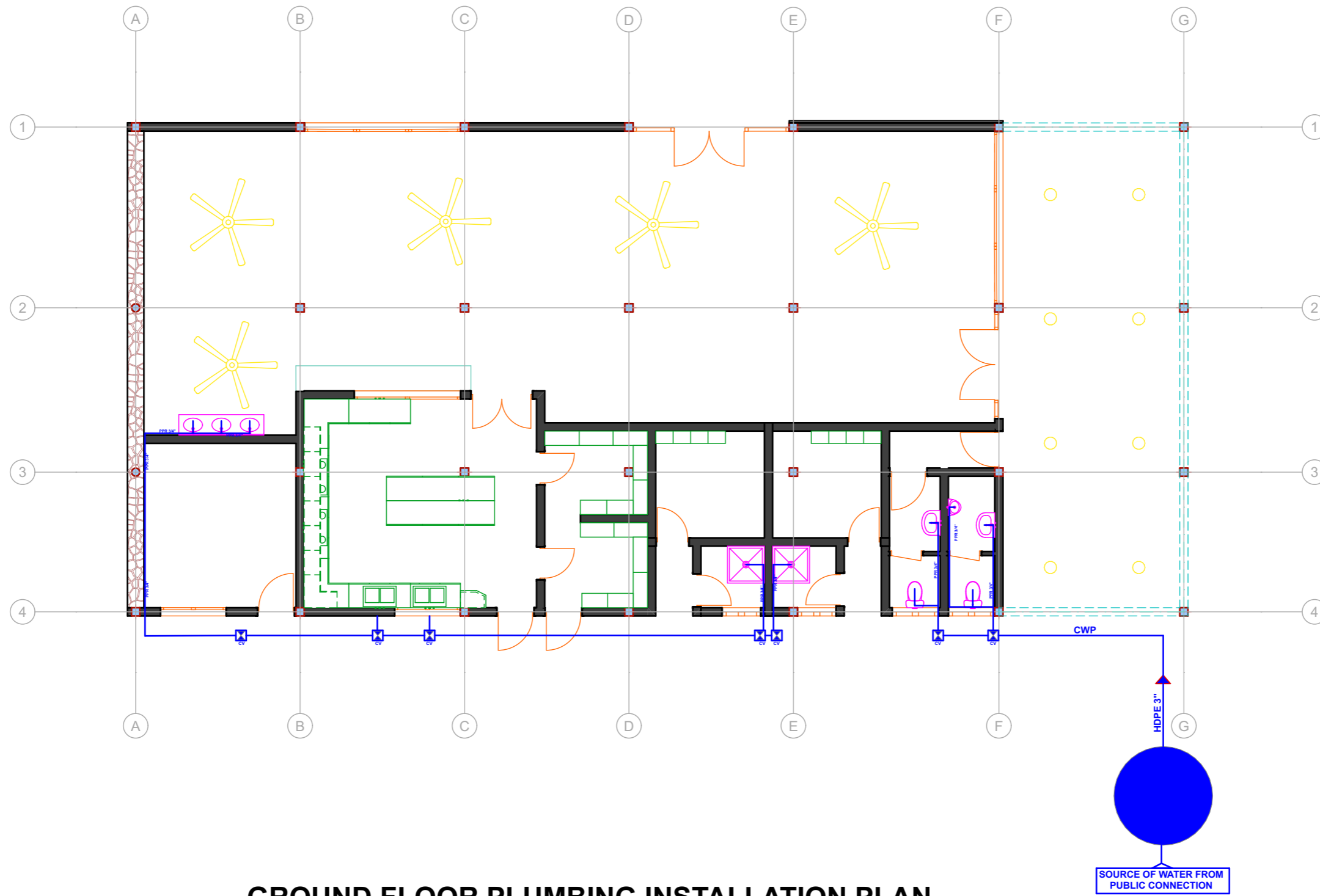
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FIRST FLOOR PLUMBING INSTALLATION PLAN

 Goldstone construction .Ltd Avenue du commerce Kigali city tower 14 th & 15 th floor tel: +250 788 483 502/ 788 394 552 PO.BOX: 6428	PROJECT: OFFICE BUILDING CONSTRUCTION CLIENT: GASABO GOLD REFINERY. LTD ADDRESS Gasabo DISTRICT kigali city RWANDA	Modified by Eng. HARERIMANA Yannick 24-09-2024 Checked by Ground Floor (6) 24-09-2024	Drawing Name PLUMBING INSTALLATION FIRST FLOOR PLAN FLOOR PLAN	Drawing Scale 1:100.96 Layout ID #LayID	Revision #ReVID
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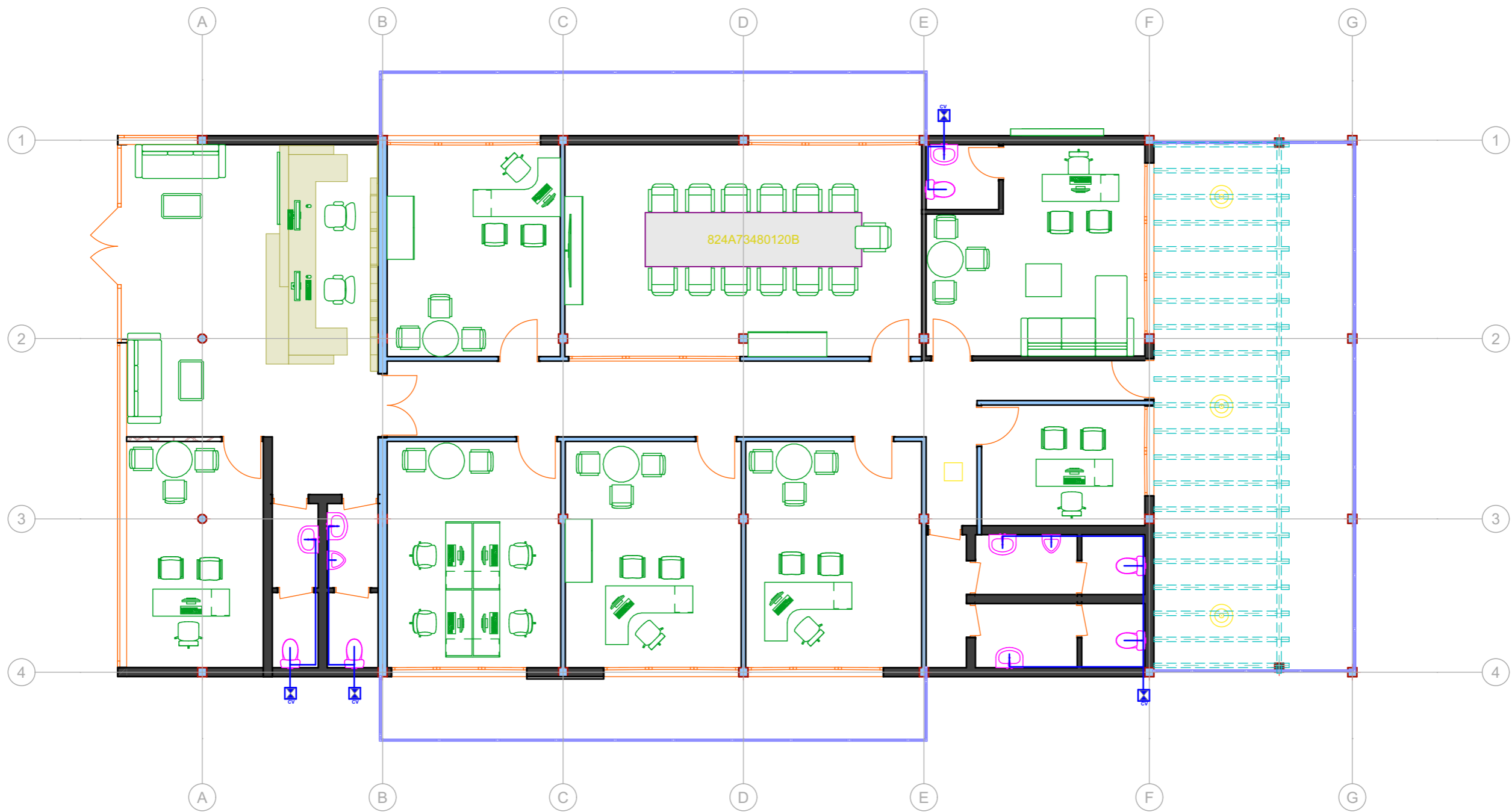
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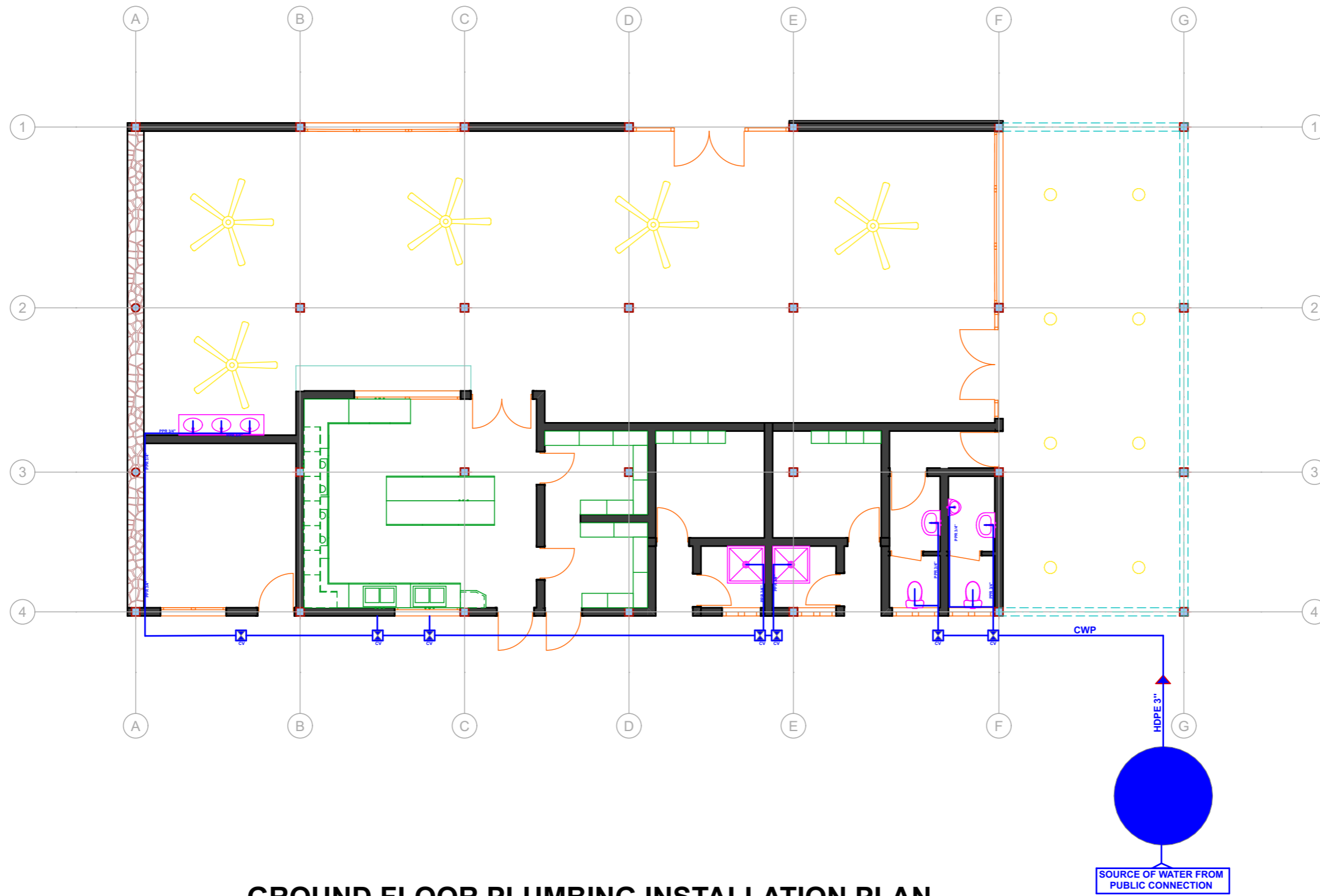
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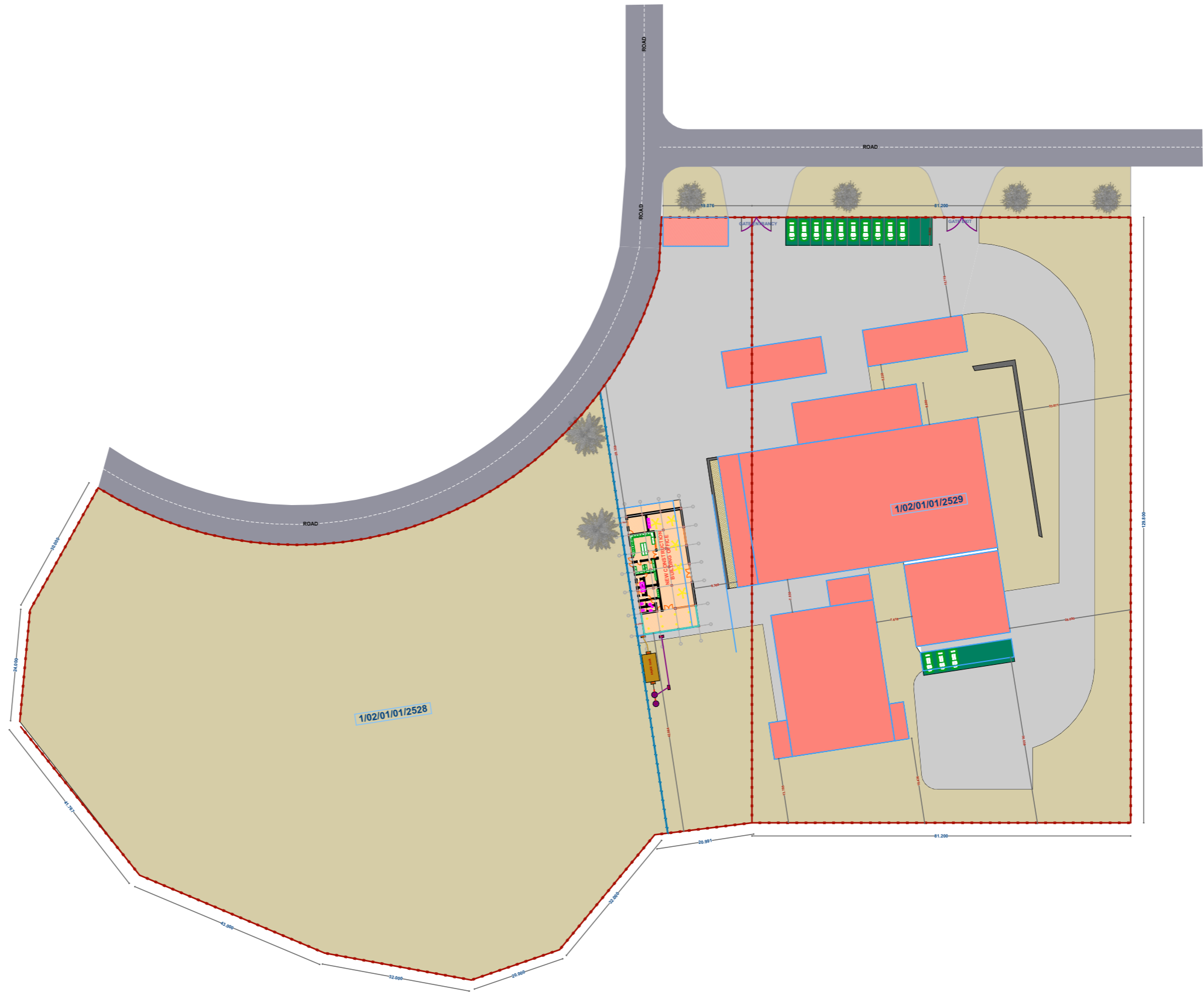
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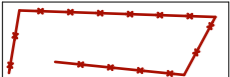
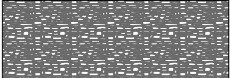
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Eng. HARERIMANA Yannick	
Checked by	24-09-2024

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	PLAN
FLOOR PLAN	

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LEGEND

-  PUBLIC ROAD
-  PAVEMENT AREAS
-  GREEN AREAS
-  EXISTING BUILDING
-  PARKING AREAS
-  NEW BUILDING OFFICE
-  BOUNDARY LINE
-  RETAINING WALL

SITE PLAN



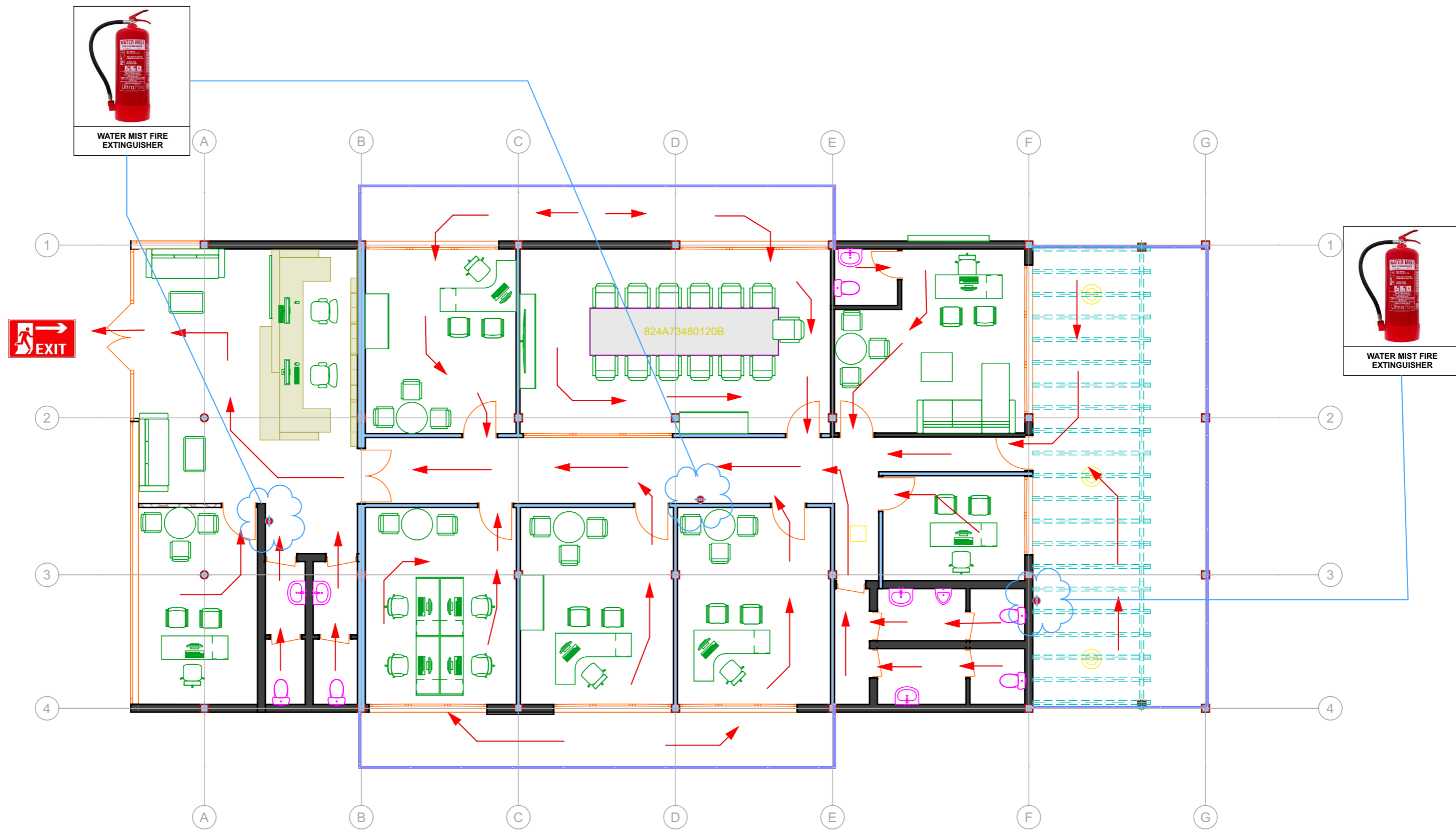
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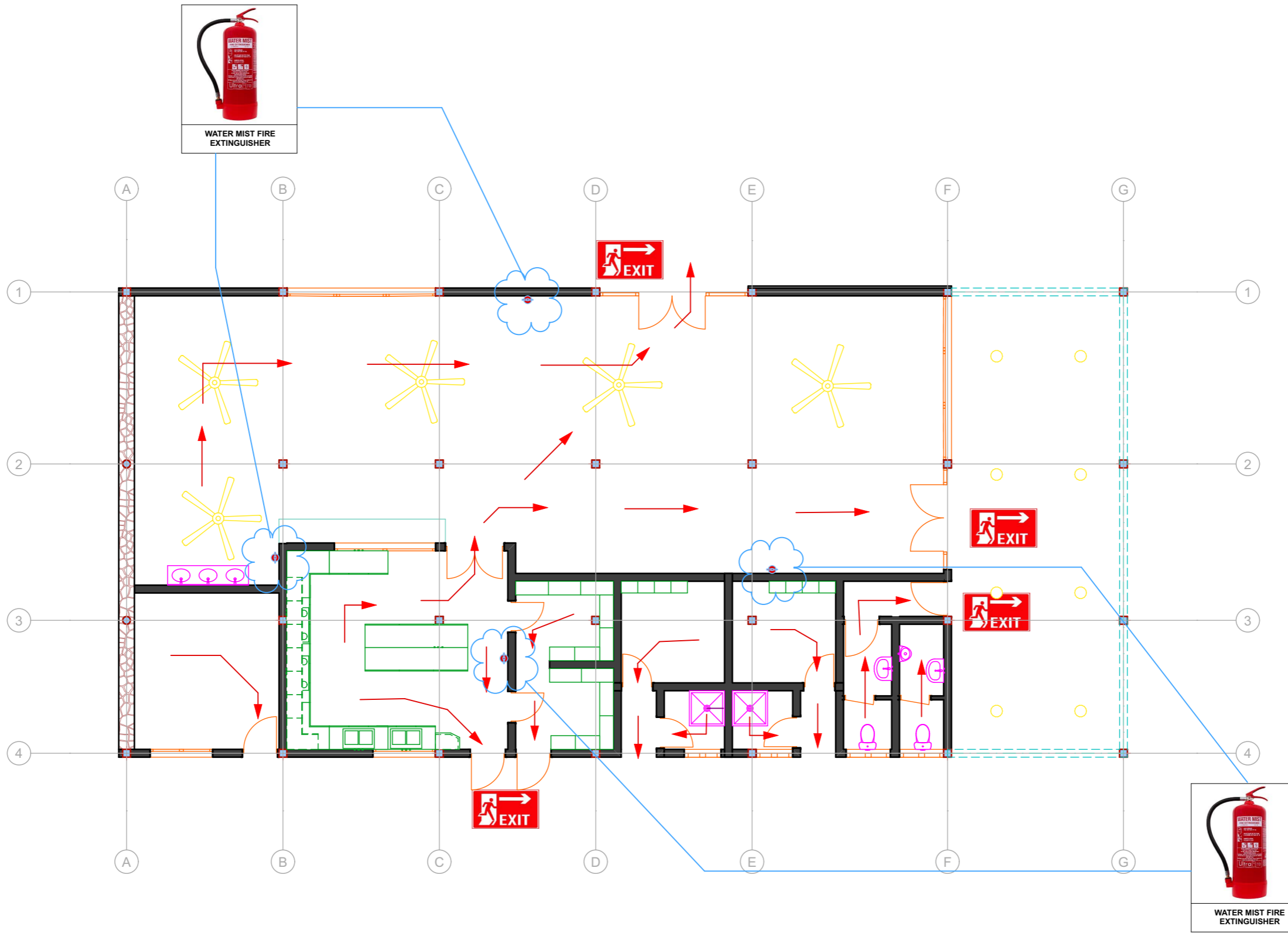
Drawing Name
SITE PLAN LAYOUT
 SITE PLAN

Drawing Scale
1:948.84, 1:500
 Layout ID #LayID
 Revision #ReVID



FIRE PROTECTION AND EXIT FIRST FLOOR PLAN

 Goldstone construction .Ltd Avenue du commerce Kigali city tower 14 th & 15 th floor tel: +250 788 483 502/ 788 394 552 PO.BOX: 6428	PROJECT: OFFICE BUILDING CONSTRUCTION CLIENT: GASABO GOLD REFINERY. LTD ADDRESS Gasabo DISTRICT kigali city RWANDA	Modified by Eng. HARERIMANA Yannick 24-09-2024 Checked by Ground Floor (10) 24-09-2024	Drawing Name FIRE PROTECTION AND EXIT FIRST FLOOR PLAN FLOOR PLAN	Drawing Scale 1:108.70 Layout ID #LayID	Revision #ReVID
					1:108.70 #ReVID



FIRE PROTECTION AND EXIT GROUND FLOOR PLAN

	Goldstone construction .ltd Avenue du commerce Kigali city tower 14 th & 15 th floor tel: +250 788 483 502/ 788 394 552 PO.BOX: 6428	PROJECT: OFFICE BUILDING CONSTRUCTION CLIENT: GASABO GOLD REFINERY. LTD ADDRESS Gasabo DISTRICT kigali city RWANDA	Modified by Eng. HARERIMANA Yannick 24-09-2024 Checked by Ground Floor (9) 24-09-2024	Drawing Name FIRE PROTECTION AND EXIT GROUND FLOOR PLAN FLOOR PLAN	Drawing Scale 1:113.29 Layout ID #LayID	Revision 1:113:29 #ReVID
	Goldstone Construction Ltd					



Goldstone Construction Ltd

BILLS OF QUANTITIES FOR OFFICE BUILDING

LOCATION: GASABO DISTRICT

NDERA SECTOR

Project owner: GASABO GOLD REFIRNEY

Item	DESCRIPTION WORKS		Unity	Qty	U.P	Amount
I	Preminaly works (site installation)	Construction Material specification				
1.1	Site installation	any brand type	ff	1		
1.2	Existing building demolished	any brand type	ff	1		
1.3	removed of demolished waste(tranport)	any brand type	ff	1		
1.4	site house for storage	any brand type	ff	1		
1.5	water tank	any brand type	pcs	1		
1.6	Temporarily fence construction	any brand type	ff	1		
1.8	office site house	any brand type	ff	1		
1.9	site public toilet	any brand type	ff	1		
	S/Total 1					
II	ELEVATION WORKS					
2.1	Masonry foundation	Nyirukobwa stone	m ³	54		
2.2	wall elevation ground floor	ruliba brick (25x17.5x9.5)	sm	359		
2.3	wall elevationn first floor (Mixing ratio 1:4, cement 42.5g + kayumbu sand)	ruliba brick (25x17.5x9.5)	sm	421.4		
2.4	Retaining wall (Mixing ratio 1:1:4, cement 42.5g + crucher sand= kayumbu sand)	Nyirukobwa stone	m ³	42		
2.5	wall partitioning size 7cm (use pine wood in partition size 4cmx5cm, Surface preparation gypsum board)	gypsum Board (water proof 12mm)	m ²	150.7		
	S/Total 2					
III	CONCRETE WORKS					
3.1	concrete footing work	iron use: steel rwa brand, concrete: c25	m ³	18.2		
3.2	Underground concrete beam	iron use: steel rwa brand, cocrrete: c25	m ³	19.9		
3.3	Concrete column	iron use: steel rwa brand, cocrrete: c25	m ³	9.2		

3.4	concrete beam ground floor	iron use: steel rwa brand, concrete: c25	m ³	19.9		
3.5	concrete beam first floor	iron use: steel rwa brand, concrete: c25	m ³	19.9		
3.7	concrete slab	iron use: steel rwa brand, concrete: c25, slab thickness: 15cm	m ³	54		
3.8	top concrete slab+ balcony	iron use: steel rwa brand, concrete: c25, slab thickness: 15cm	m ³	55		
IV	ROOF STRUCTURAL					
4.1	top glass balcony	frame: concrete, glass: glass white laminated with 8mm (Color to be chosen by client)	m ²	42		
4.2	Stainless railing with glass	frame:stainless (thickness :2mm, glass: glass clear with 8mm of thick	ml	54		
4.3	outdoor design	Structural in steel tube 60x40x1.5 and cover: cement board: 1.2mm	m ²	210		
4.4	PVC pipe 110 diameter Pn 6	any brand type	ml	67		
4.5	ceiling gypsum board with design	gypsum board :size 9mm	m ²	610		
4.6	gain of pipe drainage	clay bricks ruliba	m	57		
	S/Total 4					
V	ROOF COVER					
5.1	roof cover wall 0.9 meter height	Ruliba clay brick (25x17.5x9.5)	m ³	45		
	S/Total 7					
VI	OPENING (Aluminium Material)					
6.1	windows (Aluminium windows)	windows: aluminium white with thickness 1.5 (with all accessories)	m ²	507		
6.2	Opening (aluminium door)	door: aluminium white with thickenss 2mm (with all accessories)	m ²	195		
6.4	office woodem door	door:hard wood muvura size(240x 90x4.5mm), door cover size 4mm of thick + lock (with all accessories)	pce	30		
	S/Total 8					
VII	WALL PLASTERING					
7.1	Wall plaster inside	plaster: kayumbu sand, cement (ratio 1:4)	m ²	800		
7.2	wall design by amakoro stone	amakoro stone design (size 25x10x2)	m ²	83		
7.3	wall design by wood	wood design of wall (size 510x15x4)	m ²	34		
	S/Total 9					
VIII	FLOORING WORKS					
8.1	Concrete flooring work thick: 15cm	concrete: kayumbu sand and cement 42.5 g (ratio 1:4)	m ²	360		
8.2	ceramic flooring tiles	tiles: size 60x60 or above	m ²	690		
8.3	ceramic plinthe	tiles: size 60x60 or above	m ²	69		

8.4	Bathroom flooring tiles	wall tiles: 25x40, floor tiles: 30x30 or above	m ²	76		
8.5	top roof finishing	roofing cover and concrete moter of 5cm	m ²	342		
8.6	Outside or parking pavement	any type of concrete pave (21x10x6cm)	m ²	320		
	S/Total 10					
IX	PAITING WORKS					
9.1	Wall paiting interior & exterior	paint: inside silk and outside weather guard any brand	m ²	1270		
9.2	vanish painting on opening	paint: ameki vanish	m ²	300		
9.3	wall paint design front office exterior	Paint wall master weather guard paint	m ²	330		
	S/Total 11					
X	PLUMBING WORKS					
10..1	Plumbing works labour cost		ff	1		
10.2	Pipe 3/4" + accessoires	any type of brand (PN6)	ml	74		
10.3	Pipe 1/2" + accessoires	any brand type (Pn4.2)	ml	74		
10.4	Pipe 1' 1/4 + accessoires	any brand type (PN6)	ml	54		
10.5	Pipe 1" + accessoires	any brand type pn6	ml	56		
10.6	WC + accessoires	toilet: mirano italy brand	pce	7		
10.7	Basin + accessoires	basin: mirano italy brand	pce	7		
10.8	Toilet paper support	any brand type	pce	7		
10.90	soap support	any brand type	pce	7		
10.10	Mirror	any brand type 5mm fo thick (45x60 cm)	pce	7		
10.11	Urinal	Mirano italy brand type for men with all accessories	pce	3		
	S/Total 12					
XI	EVACUATION SYSTEM					
11.1	PVC Pipe(diam=63)	any type of brand (PN6)	ml	80		
11.2	PVC pipe (diam=90)	any type of brand (PN6)	ml	79		
11.3	PVC pipe (diam=110)	any type of brand (PN6)	ml	79		
11.4	Man hole 60x60 extérieur	man hole: brick+concrete (mix ration 1:3)	pce	7		
11.5	Man hole 100x100 extérieur	man hole: brick + concrete (mix ration 1:3)	pce	7		
11.6	Siphons de sol	any brand type (size : 90mm)	pce	19		
11.7	Degrisseur	degraisseur: plastic type or metal type	pce	1		
	S/Total 13					
XIII	OUTSIDE MANAGEMENT					
13.1	Septic tank for 15 Usagers	septic tank: plastic	pce	1		
13.2	soak pit	soak pit: holes (size 25m of height x 90 cm diameter)	pce	1		

13.3	Puisard pour eau de ruissellement		pce	2		
	S/TOTAL 15					

THE TOTAL						0
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ELECTRICAL

ITEM	DESCRIPTION AND SPECIFICATION	UNIT	QTY	RATE (Rwf)	AMOUNT(RWF)
	All prices are comprisive of the supply, handling , commissining and the installation as per the specifications and the plans. All items before instatallation it should be approved by Engineer				
	<u>A. Lighting</u>				
	<u>Luminaries</u>				
1	LUMINAIRE TYPE A				
	Surface mounted LED tube louvers light fitting ,IP65,1800lm,36w 4000k	No	4		
2	LUMINAIRE TYPE B				
	600X600mm ceiling recessed 36W LED panel fittings 3400Lm IP 20	No	38		
	LUMINAIRE TYPE C				
3	<i>Ceilling recessed mounted LED downlight Fitting, 1500lm 12W ,3000k.</i>	No	22		
	LUMINAIRE TYPE D				
4	<i>surface mounted LED downlight Fitting, 1500lm 15W ,4000k.</i>	No	20		
	<u>Switches, 230V, 10A, IP20 with appropriate box :</u>				
3	16A 1 gang 1way switch	pcs	38		

4	16A 2gang 1way switch		pcs	1		
6	16A 1gang 2way switch		pcs	6		
7	16A 2gang 2way switch		pcs	4		
	SUB-TOTAL A. LIGHTING					
	<u>B. Power</u>					
	<u>Socket outlets</u>					
1	Single Normal power socket 1P+E,230V,16A IP20. Mounting on WALLS		pcs	16		
2	Twin normal power socket 2P+E,230V,16A IP20. Mounting on WALLS		pcs	46		
	SUB TOTAL B. POWER					
	DISTRIBUTION BOARD					
1	12 ways SPN Distribution board Typical DB/Ground floor as per schematics flush mounted on the wall complete all necessary connecting materials including DIN mouting rail, and lockable cover.		No	2		
a	25A SP, 30 mA RCD Main Incomer		No	2		
b	20A SP, MCB		No	12		
c	16A SP, MCB		No	6		
d	10A SP, MCB		No	14		
	<u>C. Wiring</u>					

	Wiring with copper conductors and PVC insulation and shield				
1	1,5mm ² Cu wire for the lighting		Rolls	20	
2	2,5mm ² Cu wire for the sockets		Rolls	18	
	<u>Piping</u>				
3	PVC rigid conduits 32 mm		m	12	
4	PVC rigid or flexible conduits 25 mm(for slab)		m	140	
5	1/2 Tangit glue		Kg	2	
	<u>Boxes</u>				
6	40x40mm plastic Connection Box		No	20	
7	Twin Metalic MK Box for twin sockets		No	46	
8	Single Metalic MK Box for single sockets & switches		No	65	
	SUB TOTAL C. WIRING & BOXES				
	<u>D. Addressable Fire detection and Fire Alarm.</u>				
1	Manual call point /Break glass.		No	7	
2	Photoelectric smoke detector.		No	18	
3	Heat detector.		No	1	
4	Electronic sounder with an outlet of 90dB at 1meter		No	6	
5	4-Zone addressable Fire Alarm control panel complete 72 hours standby batterie autonomie.		No	2	
6	Allow for detector and Sounders wiring in 1.0mm Twin fire resistant cable (Average 40mm)		Lm	320	
	SUB TOTAL FIRE DETECTION & FIRE ALARM				

SUMMARY OF PRICES ELECTRICAL INSTALLATION					
SUB TOTAL A. LIGHTING					
SUB TOTAL B. POWER					
SUB TOTAL C. WIRING & BOXES					
SUB TOTAL D. FIRE ALARM & DETECTION					
TOTAL: BASEMENT FLOOR :ELECTRICAL INSTALLATION					

AC/FAN

ITEM	DESCRIPTION	UNIT	QTY	RATE	RWF
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A	AIR CONDITINER				
1	Supply install and commissioning 2400BTU Wall mounted air conditioning unit complete with refugeration piping, drainage piping,communication cable, power supply cable, AVS & Brakets	No	10		
B	AIR FAN SYSTEM				

1	Big Ass Haiku ceiling fan, number of blades 3 ,fan width 15" Fan height 24", blade material steel ,speed material steel,Speed control RF remote or fan control switch,Speed available 5,Motor RPM 600-1200, Voltage 240v/50Hz,Wattage 20w-90w with complete accessories	pcs	5		
TOTAL 3.2 AC & AIR FAN SYSTEM					-
					-

STRUCTURAL DETAILING

DETAILING OF

- FOUNDATION
- SLAB
- BEAMS
- COLUMN



PROJECT: PROPOSED OFFICE BUILDING

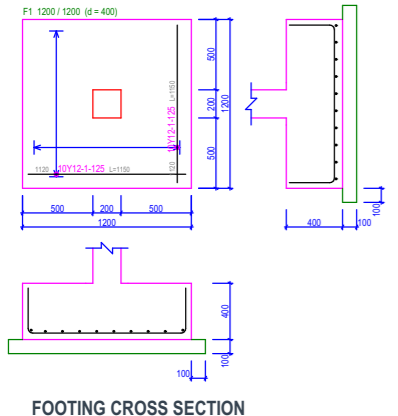
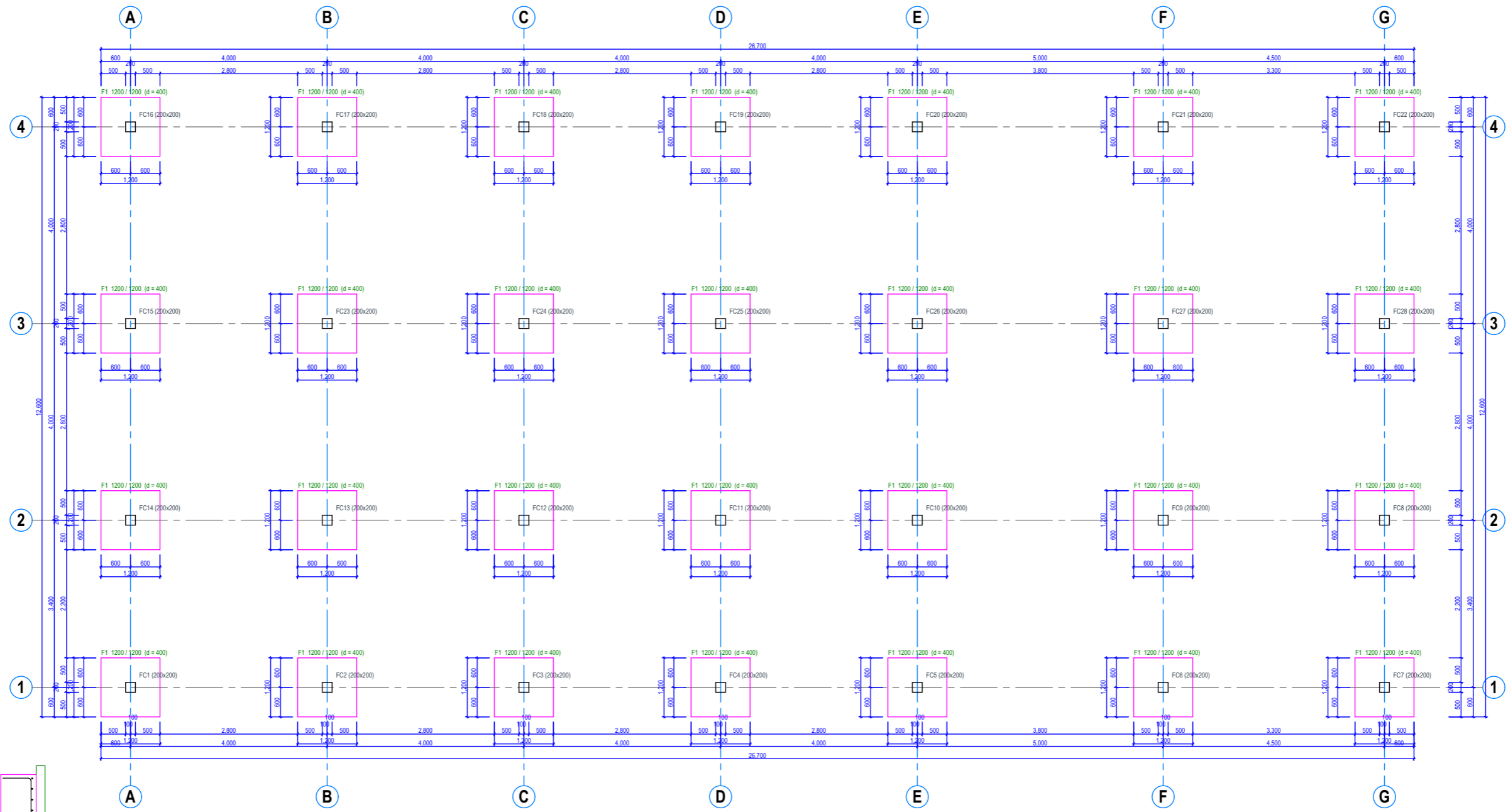
LOCATED AT: KIGALI CITY-GASABO DISTRICT-BUMBOGO SECTOR

ON PLOT NO: 1/02/01/01/2528

CLIENT: GASABO GOLD REFINERY LTD

Done by Eng. HARERIMANA YANICK

Date: 28/09/2024



FOUNDATION DETAILS



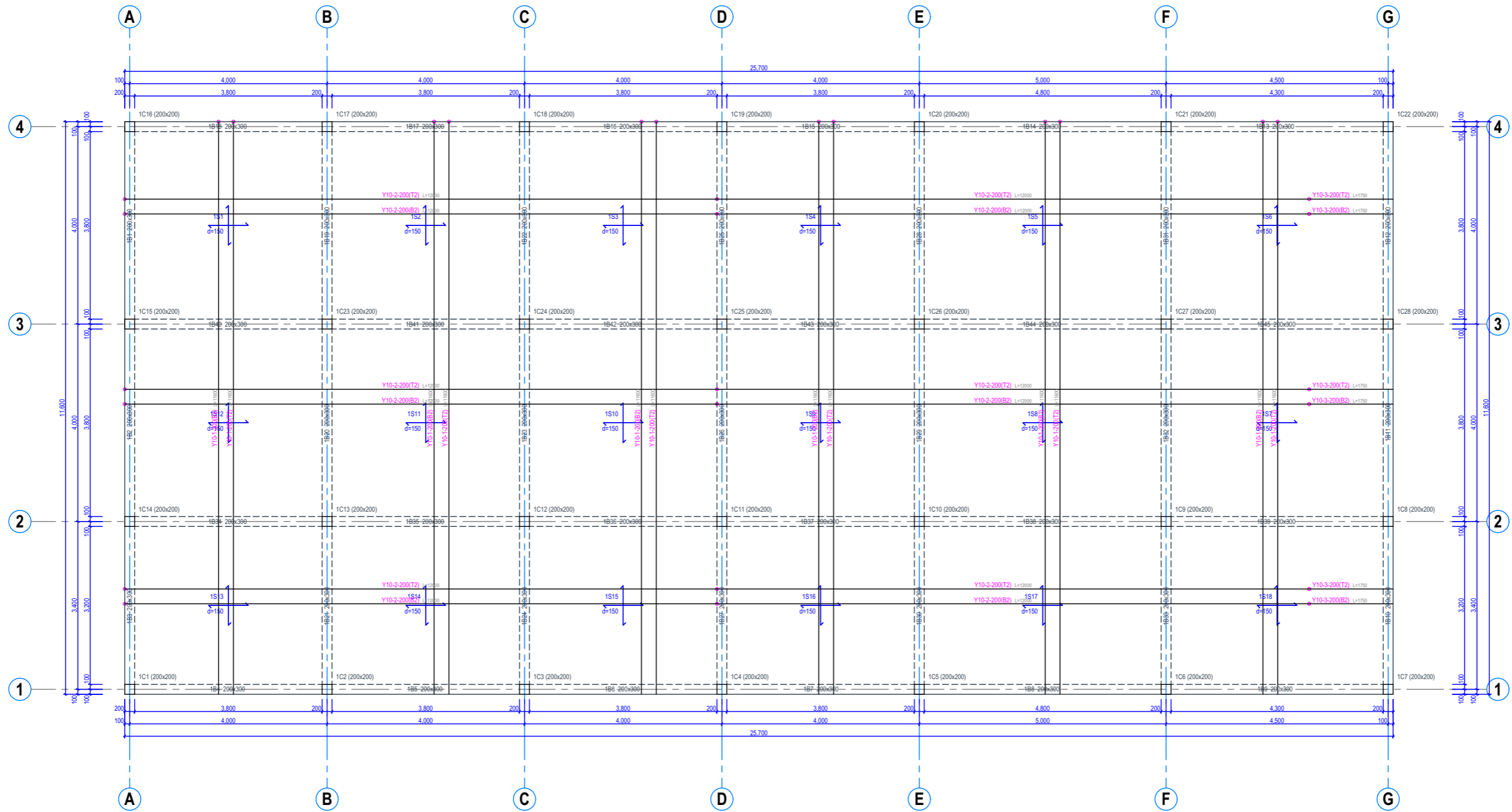
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 Checked by
Eng. Harerimana yannick 28/09/2024

Drawing Name
Structure detailing
 Drawing Status

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1:50
 Layout ID
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SLAB DETAILS



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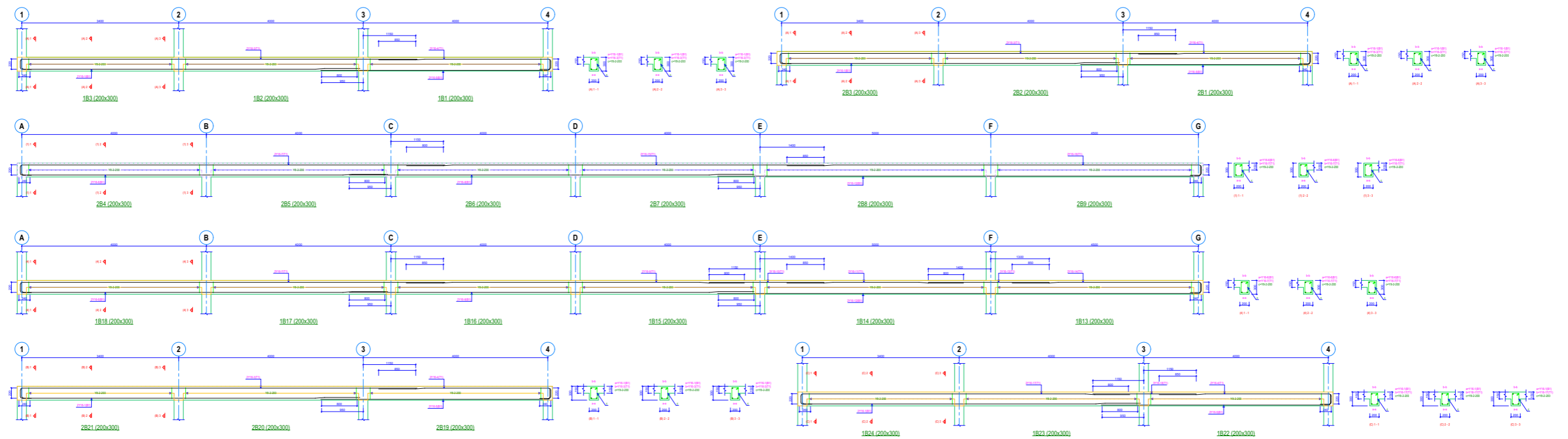
Drawing Status

Drawing Scale

1:50

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BEAM DETAILS



Goldstone construction .ltd
 Avenue du commerce
 Kigali city tower 14th & 15th floor
 tel: +250 788 483 502/ 788 394 552
 PO.BOX: 6428

PROJECT: PROPOSED OFFICE BUILDING
 CLIENT: GASABO GOLD REFINERY LTD
 ADDRESS
 KIGALI CITY-GASABO DISTRICT-BUMBOGO SECTOR
 RWANDA

Modified by
Eng. Harerimana yannick

28/09/2024

Checked by
Eng. Harerimana yannick

28/09/2024

Drawing Name
Structure detailing

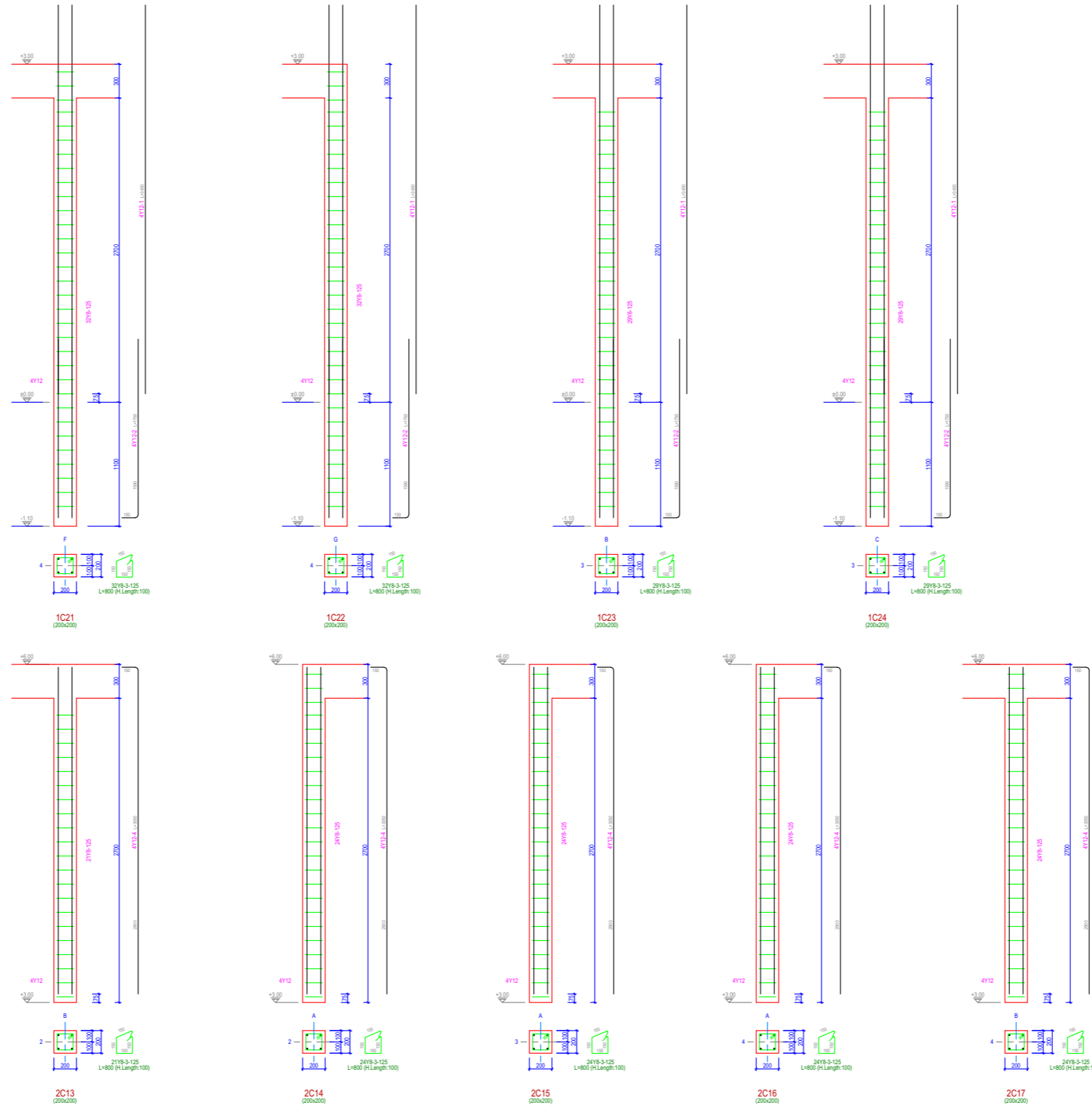
Drawing Status

Drawing Scale

1:50

Layout ID
#LayID

Revision
#Revid



COLUMN DETAILS



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Drawing Name
Structure detailing
 Drawing Status

Drawing Scale
1:50
 Layout ID
#LayID Revision
#ReVID

STRUCTURAL NOTES

R.C.C STUCTURES DESIGN OF

- SLAB
- BEAMS
- COLUMNS
- FOUNDATION



PROJECT: PROPOSED OFFICE BUILDING

LOCATED AT: KIGALI CITY-GASABO DISTRICT-BUMBOGO SECTOR

ON PLOT NO: 1/02/01/01/2528

CLIENT: GASABO GOLD REFINERY LTD

Done by Eng. HARERIMANA YANICK

Date: 28/09/2024

REINFORCED CONCRETE STRUCTURAL DESIGN

DESIGN INFORMATION

Client: GASABO GOLD REFINERY LTD	Engineer responsible:
❖ BS 8110-1997: The structural use of Concrete 1992	Relevant Building Regulations and Design Code
Office Building	Intended use of the building
Roof –Imposed 1.5 kN/m ² -Finishes 1.5 kN/m ² Floor –Imposed (3) and partitions (1) 1.2 kN/m ² Stairs – Imposed 4 kN/m ² - Finishes 1.25 kN/m ²	General loading conditions
Severe(external)and Mild (internal)	Exposure conditions
Variable according to the site conditions: Allowable bearing pressure = 380 kN/ m ²	Subsoil conditions
Reinforced Concrete footing to columns.	Foundation type
Concrete: Grade C 25 (with 25mm max. aggregates. Mix ratio 350 kg/ m ³ Reinforcements: -Characteristic strength: $f_y = 410 \text{ N/mm}$ for stirrups $f_y = 250 \text{ N/mm}^2$	Material data
Self weight of Reinforced concrete = 25kN/ m ³ Self weight of masonry = 18kN/ m ³	Other relevant information's
For dead load : 1.4 For live load : 1.6	Partial factor of safety

REINFORCED CONCRETE STRUCTURAL DESIGN

1. SLAB DESIGN

Load case:

We choose the most loaded slab panel.

Slab panel size:

$L_x=4.00\text{m}$

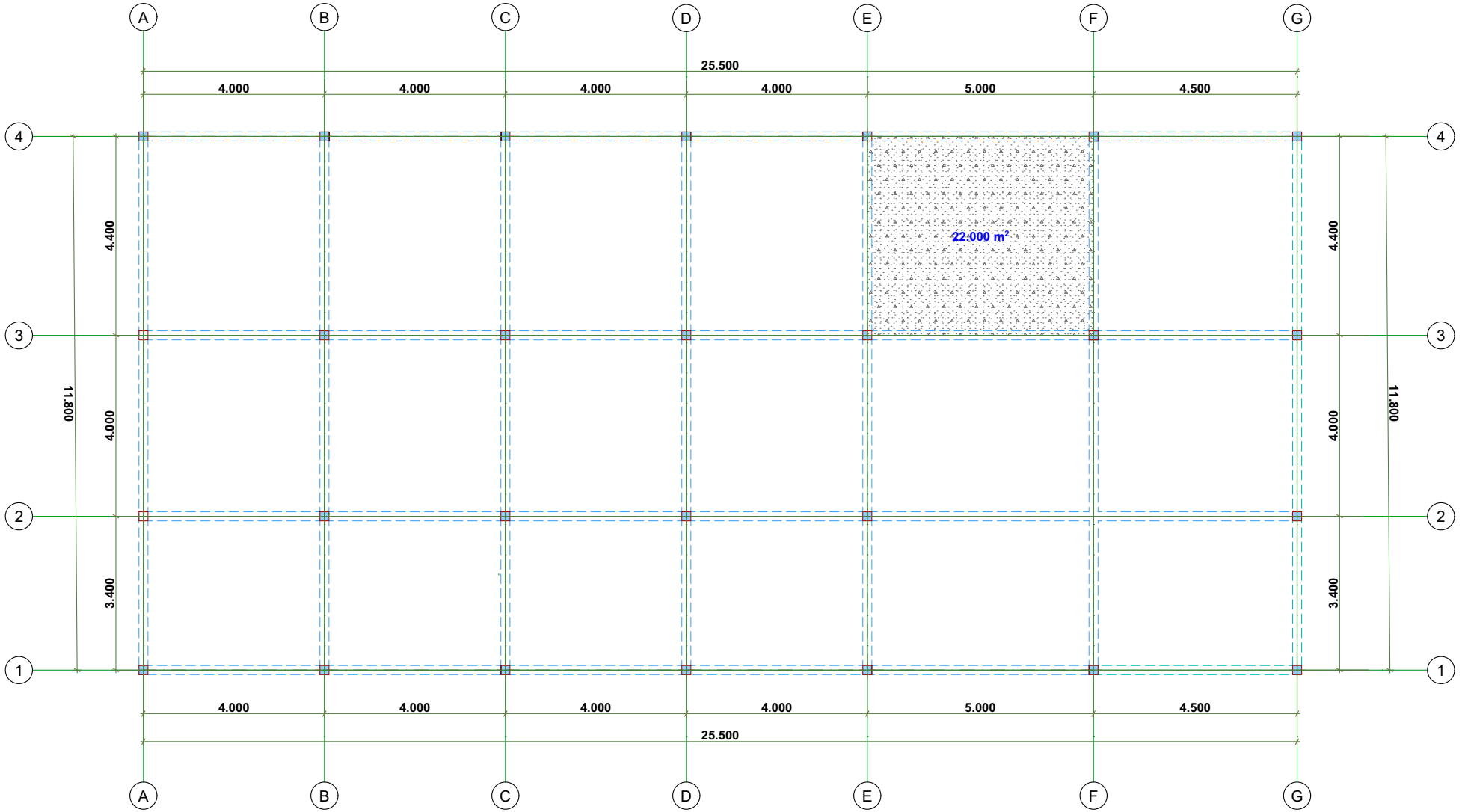
$L_y=5.00\text{m}$

$L_y/L_x=5.00/4.00=1.25 < 2$ [Two-way slab]

Thickness determination

$L_x=4.00\text{m}$; $d=4.00/30=133\text{ mm}$ ----- $4.00/40=100\text{ mm}$ Average= 117 mm . Take $d=150\text{mm}$.

SLAB PANEL



Project	PROPOSED OFFICE BUILDING	Made by	Eng.YANICK.	Date	Sep-24	Page	
Client	GASABO GOLD REFINERY LTD	Checked	OSC	Revision	-	Job No	
Location	KIGALI CITY-GASABO DISTRICT-BUMBOGO SECTOR	2-WAY SPANNING INSITU CONCRETE SLABS to BS 8110:1997 (Table 3.14)					
Originated from RCC94.xls v2.1		© 1999-2003 BCA for RCC					

DIMENSIONS		MATERIALS		STATUS		VALID DESIGN	
short span, lx	m	4.00	fcu N/mm ²	30	gc =	1.50	
long span, ly	m	5.00	fy N/mm ²	410	gs =	1.05	
h	mm	150	Density	kN/m ³	25		
Top cover	mm	20	(Normal weight concrete)				
Btm cover	mm	20	Plan				
LOADING characteristic		EDGE CONDITIONS					
Self weight	kN/m ²	4.20	Edge 1	C	C = Continuous		
Extra dead	kN/m ²	0.70	Edge 2	C	D = Discontinuous		
Total Dead, gk	kN/m ²	4.90	Edge 3	C			
Imposed, qk	kN/m ²	4.00	Edge 4	C			
Design load, n	kN/m ²	13.26	See Figure 3.8 and clauses 3.5.3.5-6				

MAIN STEEL	SHORT SPAN x	LONG SPAN y	EDGE 1 Continuous	EDGE 2 Continuous	EDGE 3 Continuous	EDGE 4 Continuous	Reference	
	βs	0.033	0.024	0.044	0.032	0.044		0.032
M kNm/m	7.0	5.1	9.4	6.8	9.4	6.8		
d mm	125.0	115.0	125.0	115.0	125.0	115.0		
k'	0.156	0.156	0.156	0.156	0.156	0.156		
k	0.015	0.013	0.020	0.017	0.020	0.017	3.4.4.4	
Z mm	118.8	109.3	118.8	109.3	118.8	109.3		
As req mm ² /m	152	119	202	159	202	159		
As min mm ² /m	360	360	360	360	360	360	Table 3.25	
As deflection mm ² /m	152	119	~	~	~	~		
Ø mm	10	10	10	10	10	10		
Layer	B 1	B 2	T 1	T 2	T 1	T 2		
@ mm	200	200	200	200	200	200		
As prov mm ² /m	393	393	393	393	393	393		
= %	0.314	0.341	0.314	0.341	0.314	0.341	%	
S max mm	385	355	385	355	385	355	Clause 3.12.11.2.7	
Subclause	(a)	(a)	(a)	(a)	(a)	(a)		
DEFLECTION								
fs	106	83	141	111	141	111	Eqn 8	
Mod factor	2.000							Eqn 7
Perm L/d	52.00	Actual L/d	32.00	Asx enhanced 0.0% for deflection control			Table 3.10	

TORSION STEEL	Ø mm	BOTH EDGES DISCONTINUOUS		ONE EDGE DISCONTINUOUS		Reference
		X	Y	X	Y	
As req	mm ² /m	360		360		3.5.3.5
As prov T	mm ² /m	5000	5000	5000	5000	
Additional As T req	mm ²	0	0	0	0	
As prov B	mm ² /m	393	393	393	393	

Bottom steel not curtailed in edge strips at free edges

SUPPORT REACTIONS (kN/m char uno)					(See Figure 3.10)		Sum βvx = 0.800		Table 3.15	
	EDGE 1	EDGE 2	EDGE 3	EDGE 4			Sum βvy = 0.667		equations 19 & 20	
βv	3, N-O	O, 4-3	4, N-O	N, 4-3						
Dead kN/m	0.400	0.333	0.400	0.333						
Imposed kN/m	7.84	6.53	7.84	6.53						
Vs kN/m	6.40	5.33	6.40	5.33						
	21.2	17.7	21.2	17.7						

OUTPUT/SUMMARY	SHORT SPAN	LONG SPAN	EDGE 1	EDGE 2	EDGE 3	EDGE 4
	PROVIDE MAIN STEEL	R10 @ 200 B1	R10 @ 200 B2	R10 @ 200 T1	R10 @ 200 T2	R10 @ 200 T1
ADDITIONAL TORSION STEEL	CORNER 1	CORNER 2	CORNER 3	CORNER 4		
	N3	O3	O4	N4	placed in edge strips	
X direction						
Y direction						

CHECKS	BAR Ø	SINGLY	MIN	MAX	GLOBAL
Lx > Ly	< COVER	REINFORCED	SPACING	SPACING	DEFLECTION STATUS
OK	OK	OK	OK	OK	VALID DESIGN

Project
Location

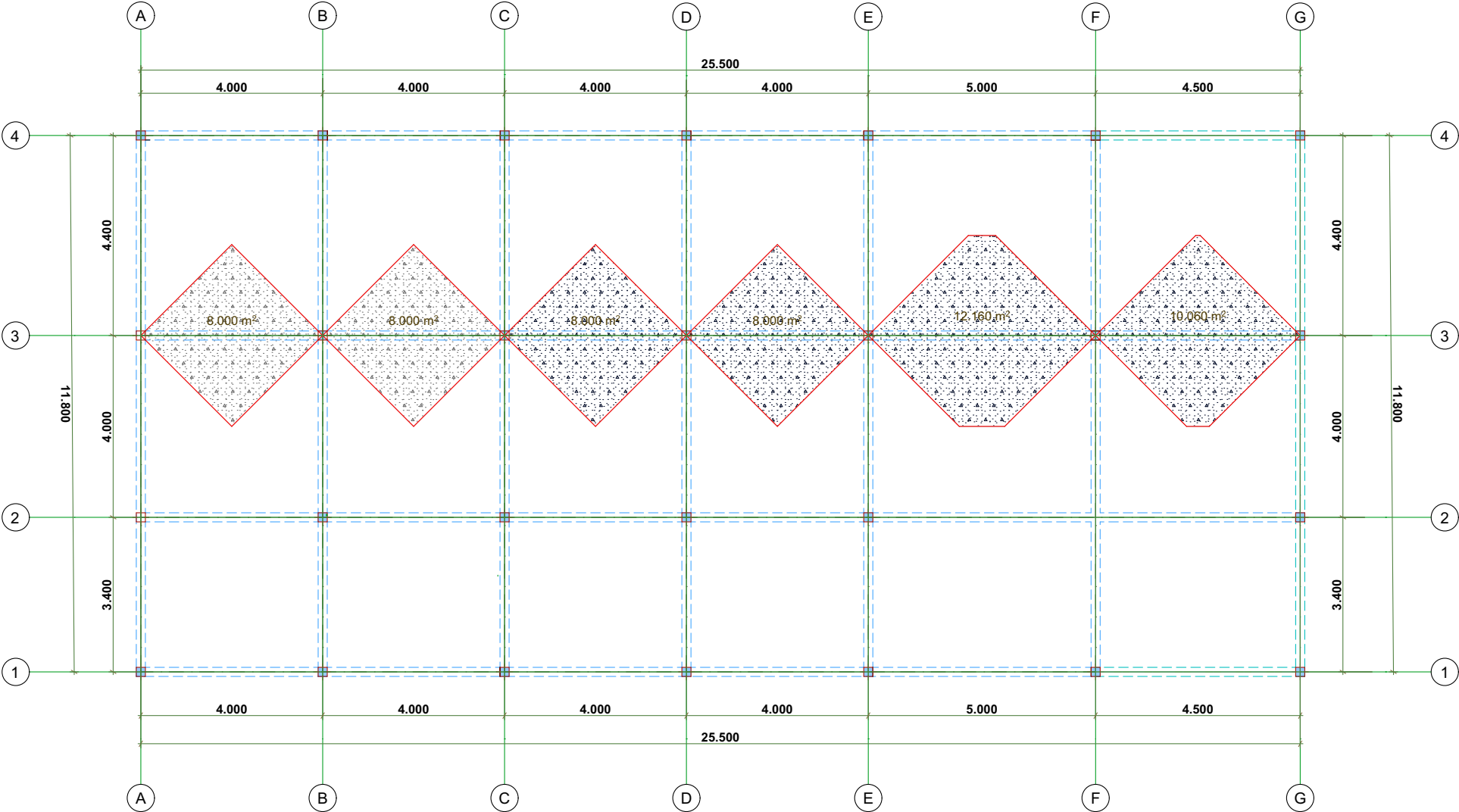
PROPOSED OFFICE BUILDING
KIGALI CITY-GASABO DISTRICT-BUMBOGO SECTOR
 2-WAY SPANNING INSITU CONCRETE SLABS to BS 8110:1997 (Table 3.14)
 Originated from RCC94.xls v2.1 © 1999-2003 BCA for RCC

Made by Job No
Date 0-Jan-00

APPROXIMATE WEIGHT of REINFORCEMENT

SUPPORT WIDTH (mm)	GRIDLINE WIDTH	3 O 4 N								
		<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>					
TOP STEEL										
		Type	Dia		Spacing	No	Length	Unit wt	Weight	
	Across grid 3	R	10	@	200	24	1000	0.617	14.8	
	Across grid O	R	10	@	200	19	1250	0.617	14.6	
	Across grid 4	R	10	@	200	24	1000	0.617	14.8	
	Across grid N	R	10	@	200	19	1250	0.617	14.6	
	Along grid 3	R	10	@	200	5	3300	0.617	10.2	
	Along grid O	R	10	@	200	6	2800	0.617	10.4	
	Along grid 4	R	10	@	200	5	3300	0.617	10.2	
	Along grid N	R	10	@	200	6	2800	0.617	10.4	
	Torsion bars	R	10			0	0	0.617	0.0	
BOTTOM STEEL										
	Short span - middle	R	10	@	200	19	3350	0.617	39.2	
	edges	R	10	@	200	6	4300	0.617	15.9	
	Long span - middle	R	10	@	200	15	4150	0.617	38.4	
	edges	R	10	@	200	4	5300	0.617	13.1	
SUMMARY										
	Reinforcement density (kg/m ³)	68.8							Total reinforcement in bay (kg)	207

2. TYPICAL BEAM DESIGN "BEAM 2"



PROJECT NAME: PROPOSED OFFICE BUILDING

STRUCTURAL ANALYSIS AND DESIGN

LONGITUDINAL BEAM

DEAD LOAD ESTIMATION ON CONTINUOUS BEAM

Wall	N_w [kN/m ³]	S_w [m ²]	G_w [kN/m]	Finishes	N_w [kN/m ³]	S_w [m ²]	G_f [kN/m]	G_w+G_f [kN/m]
3	18.00	0.50	9.00	3	20.00	0.17	3.40	12.40

SLAB	N_s [kN/m ²]	S [m ²]	l [m]	Q_p [kN/m]	BEAM	H-H _f [m]	b_w [m]	N [kN/m ³]	G_k [kN/m]	Wall+Finishes	Dead load [kN/m]
A--B	5.75	8.00	4.00	11.50	A--B	0.25	0.20	25.00	1.25	12.40	25.15
B--C	5.75	8.00	4.00	11.50	B--C	0.25	0.20	25.00	1.25	12.40	25.15
C--D	5.75	8.00	4.00	11.50	C--D	0.25	0.20	25.00	1.25	12.40	25.15
D--E	5.75	8.00	4.00	11.50	D--E	0.25	0.20	25.00	1.25	12.40	25.15
E--F	5.75	12.16	5.00	13.98	E--F	0.25	0.20	25.00	1.25	12.40	27.63
F--G	5.75	10.06	4.50	12.85	F--G	0.25	0.20	25.00	1.25	12.40	26.50

LIVE LOAD ESTIMATION ON BEAMS

BF CALCULATION

BEAM	l [m]	N [kN/m ²]	S_w [m ²]	Q_k [kN/m]	b_w [m]	l [m]	$L_o = 0.7l$	$B_f = b_w + L_o/5$
A--B	4.00	2.00	8.00	4.00	0.20	4.00	2.80	760.00
B--C	4.00	2.00	8.00	4.00	0.20	4.00	2.80	760.00
C--D	4.00	2.00	8.00	4.00	0.20	4.00	2.80	760.00
D--E	4.00	2.00	8.00	4.00	0.20	4.00	2.80	760.00
E--F	5.00	2.00	12.16	4.86	0.20	5.00	3.50	900.00
F--G	4.50	2.00	10.06	4.47	0.20	4.50	3.15	830.00

Project	PROPOSED OFFICE BUILDING		
Client	GASABO GOLD REFINERY LTD		
Location	KIGALI CITY-GASABO DISTRICT-BUMBOGO SECTOR		
	CONTINUOUS BEAM (Analysis & Design) to BS 8110:1997		
	<small>Originated from RCC41.xls v2.1 on CD © 1999-2003 BCA for RCC</small>		
	Made by	Date	Sheet No
	Eng.YANICK.	Sep-24	
	Checked	Revision	Job No

LOCATION Supports from grid **1** to grid **8**

MATERIALS	fcu	<u>30</u>	N/mm ²	h agg	<u>20</u>	mm	COVERS (to all steel)
	fyI	<u>410</u>	N/mm ²	γs	<u>1.05</u>		Top cover
	fyv	<u>250</u>	N/mm ²	γc	<u>1.50</u>		Btm cover
							Side cover
							<u>25</u> mm
							<u>20</u> mm
							<u>20</u> mm

SPANS	L (m)	H (mm)	bw (mm)	hf (mm)	Type	bf (mm)
SPAN 1	<u>4.00</u>	<u>300</u>	<u>200</u>	<u>150</u>	T	<u>200</u>
SPAN 2	<u>4.00</u>	<u>300</u>	<u>200</u>	<u>150</u>	T	<u>200</u>
SPAN 3	<u>4.00</u>	<u>300</u>	<u>200</u>	<u>150</u>	T	<u>200</u>
SPAN 4	<u>4.00</u>	<u>300</u>	<u>200</u>	<u>150</u>	T	<u>200</u>
SPAN 5	<u>5.00</u>	<u>300</u>	<u>200</u>	<u>150</u>	T	<u>200</u>
SPAN 6	<u>4.50</u>	<u>300</u>	<u>200</u>	<u>150</u>	T	<u>200</u>
SPAN 7						
SPAN 8						
SPAN 9						

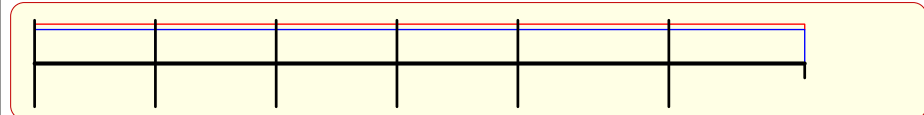
LOADING PATTERN	min	max
	DEAD	<u>1</u>
IMPOSED	<u>0</u>	<u>1.6</u>

REBAR LAYERING
Support steel
in alt layer ? Y

SUPPORTS	ABOVE (m)	H (mm)	B (mm)	End Cond	BELOW (m)	H (mm)	B (mm)	End Cond
Support 1	<u>3.00</u>	<u>200</u>	<u>200</u>	F	<u>3.00</u>	<u>200</u>	<u>200</u>	F
Support 2	<u>3.00</u>	<u>200</u>	<u>200</u>	F	<u>3.00</u>	<u>200</u>	<u>200</u>	F
Support 3	<u>3.00</u>	<u>200</u>	<u>200</u>	F	<u>3.00</u>	<u>200</u>	<u>200</u>	F
Support 4	<u>3.00</u>	<u>200</u>	<u>200</u>	F	<u>3.00</u>	<u>200</u>	<u>200</u>	F
Support 5	<u>3.00</u>	<u>200</u>	<u>200</u>	F	<u>3.00</u>	<u>200</u>	<u>200</u>	F
Support 6	<u>3.00</u>	<u>200</u>	<u>200</u>	F	<u>3.00</u>	<u>200</u>	<u>200</u>	F
Support 7								
Support 8								
Support 9								
Support 10								

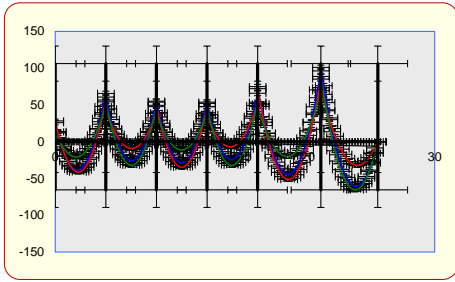
LOADING	UDLs (kN/m)		PLs (kN)		Position (m)		Dead Load	Imposed Load	Position from left	Loaded Length
	Dead	Imposed	Position	Loaded	from left	Length				
Span 1	<u>25.2</u>	<u>4.0</u>					<u>25.2</u>	<u>4.0</u>		
UDL										
PL 1										
PL 2										
Part UDL										
Span 2	<u>25.2</u>	<u>4.0</u>					<u>25.2</u>	<u>4.0</u>		
UDL										
PL 1										
PL 2										
Part UDL										
Span 3	<u>25.2</u>	<u>4.0</u>					<u>25.2</u>	<u>4.0</u>		
UDL										
PL 1										
PL 2										
Part UDL										
Span 4	<u>25.2</u>	<u>4.0</u>					<u>25.2</u>	<u>4.0</u>		
UDL										
PL 1										
PL 2										
Part UDL										
Span 5	<u>25.2</u>	<u>4.0</u>					<u>25.2</u>	<u>4.0</u>		
UDL										
PL 1										
PL 2										
Part UDL										
Span 6	<u>25.2</u>	<u>4.0</u>					<u>25.2</u>	<u>4.0</u>		
UDL										
PL 1										
PL 2										
Part UDL										
Span 7										
UDL										
PL 1										
PL 2										
Part UDL										
Span 8										
UDL										
PL 1										
PL 2										
Part UDL										
Span 9										
UDL										
PL 1										
PL 2										
Part UDL										
Span 10										
UDL										
PL 1										
PL 2										
Part UDL										

LOADING DIAGRAM

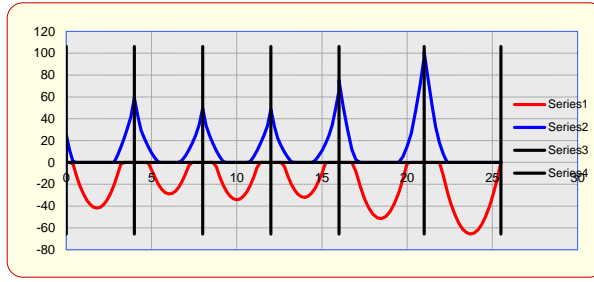


REACTIONS (kN)	1	2	3	4	5	6	7
SUPPORT							
ALL SPANS LOADED	74.8	177.3	164.3	161.8	187.3	224.4	71.1
ODD SPANS LOADED	74.8	143.3	132.5	130.1	154.9	179.6	40.3
EVEN SPANS LOADED	40.5	145.7	131.1	132.2	143.2	180.4	73.9
Characteristic Dead	44.3	107.7	99.7	98.3	112.7	135.6	43.0
Characteristic Imposed	8.0	16.6	15.4	15.1	18.5	21.6	8.6

BENDING MOMENT DIAGRAMS (kNm)



1 Elastic Moments **8**

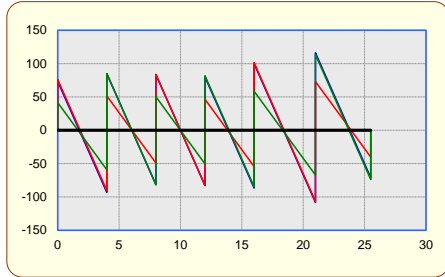


1 Redistributed Envelope **8**

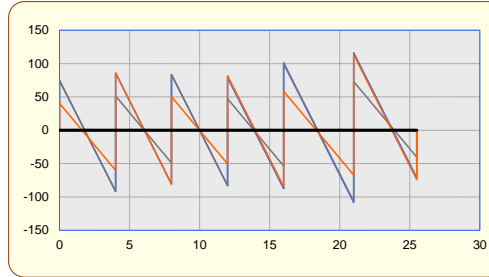
SUPPORT No	1	2	3	4	5	6	7
Elastic M	28.2	65.7	55.1	53.9	75.0	101.2	0.0
Redistributed M	25.3	59.1	49.6	48.5	75.0	101.2	0.0
βb	0.900	0.900	0.900	0.900	1.000	1.000	1.000
Redistribution	10.0%	10.0%	10.0%	10.0%	0.0%	0.0%	

SPAN No	1	2	3	4	5	6
Elastic M	41.44	32.25	34.85	32.35	51.52	65.60
Redistributed M	41.84	28.92	34.16	32.05	51.52	65.60
βb	1.010	0.896	0.980	0.991	1.000	1.000

SHEARS (kN)



1 Elastic Shears **8**



1 Redistributed Shears **8**

SPAN No	1		2		3	
Elastic V	76.1	93.2	84.9	81.6	83.7	82.9
Redistributed V	74.8	91.7	85.6	80.8	83.5	82.9

SPAN No	4		5		6	
Elastic V	81.7	86.7	101.4	108.3	116.1	73.9
Redistributed V	81.9	87.6	101.4	108.3	116.1	73.9

COLUMN MOMENTS (kNm)

		1	2	3	4	5	6	7
ALL SPANS	Above	12.9	-2.4	0.6	-0.9	4.6	2.4	
	Below	12.9	-2.4	0.6	-0.9	4.6	2.4	
ODD SPANS	Above	14.1	-6.6	5.3	-5.9	10.1	-5.8	
	Below	14.1	-6.6	5.3	-5.9	10.1	-5.8	
EVEN SPANS	Above	6.6	2.7	-4.4	4.4	-2.8	9.8	
	Below	6.6	2.7	-4.4	4.4	-2.8	9.8	

Project PROPOSED OFFICE BUILDING				Make by Eng.YANICK		Date Sep-2024	Page
Client GASABO GOLD REFINERY LTD				Checked		Revision	Job No
Location KIGALI CITY-GASABO DISTRICT-BUMBOGO SECTOR				CONTINUOUS BEAM (Analysis & Design) to BS 8110:1987			
© 1998-2001 BSA for RCC				© 1998-2001 BSA for RCC			
SPAN 1	ACTIONS	M	kNen	18.1	41.8	50.2	
		Ed		0.90	1.01	0.90	
	DESIGN	d	mm	243.0	264.0	243.0	
		Ac	mm ²	203	465	657	
		As	mm ²				
	TOP STEEL Layer 1			2 X 16	2 X 16	2 X 16	
		As prov	mm ²	402	402	603	
	BTM STEEL Layer 1			2 X 16	2 X 16	2 X 16	
		As prov	mm ²	402	402	402	
	DEFLECTION	L/d		15.152	35.109	35.109	
	SHEAR	V	kN	60.5	Link Ø	77.4	
		v	N/mm ²	1.245	Ø	1.592	
		vc	N/mm ²	0.714	Nominal	0.818	
LINKS	legs	No	2	RB @ 175	RB @ 150 for 750		
CHECKS	% Ac		ok	ok	ok		
	Cover		ok	ok	ok		
	min S		ok	ok	ok		
	max S		ok	ok	ok		
	Links		ok	ok	ok		
	Main bars		ok	ok	ok		
	max V		ok	ok	ok		
	Deflection		ok	ok	ok		
SPAN 2	ACTIONS	M	kNen	28.0	28.0	41.7	
		Ed		0.97	0.90	0.92	
	DESIGN	d	mm	243.0	264.0	243.0	
		Ac	mm ²	203	256	521	
		As	mm ²				
	TOP STEEL Layer 1			2 X 16	2 X 16	2 X 16	
		As prov	mm ²	603	402	402	
	BTM STEEL Layer 1			2 X 16	2 X 16	2 X 16	
		As prov	mm ²	402	402	402	
	DEFLECTION	L/d		15.152	39.367	39.367	
	SHEAR	V	kN	71.3	Link Ø	86.6	
		v	N/mm ²	1.468	Ø	1.370	
		vc	N/mm ²	0.649	Nominal	0.818	
LINKS	legs	No	2	RB @ 175	RB @ 175 for 700		
CHECKS	% Ac		ok	ok	ok		
	Cover		ok	ok	ok		
	min S		ok	ok	ok		
	max S		ok	ok	ok		
	Links		ok	ok	ok		
	Main bars		ok	ok	ok		
	max V		ok	ok	ok		
	Deflection		ok	ok	ok		
SPAN 3	ACTIONS	M	kNen	41.5	34.2	40.4	
		Ed		0.90	0.98	0.90	
	DESIGN	d	mm	243.0	264.0	243.0	
		Ac	mm ²	517	349	500	
		As	mm ²				
	TOP STEEL Layer 1			2 X 16	2 X 16	2 X 16	
		As prov	mm ²	603	402	603	
	BTM STEEL Layer 1			2 X 16	2 X 16	2 X 16	
		As prov	mm ²	402	402	402	
	DEFLECTION	L/d		15.152	35.475	35.475	
	SHEAR	V	kN	69.2	Link Ø	68.7	
		v	N/mm ²	1.424	Ø	1.413	
		vc	N/mm ²	0.649	Nominal	0.818	
LINKS	legs	No	2	RB @ 175	RB @ 175 for 700		
CHECKS	% Ac		ok	ok	ok		
	Cover		ok	ok	ok		
	min S		ok	ok	ok		
	max S		ok	ok	ok		
	Links		ok	ok	ok		
	Main bars		ok	ok	ok		
	max V		ok	ok	ok		
	Deflection		ok	ok	ok		
SPAN 4	ACTIONS	M	kNen	40.8	32.0	57.3	
		Ed		0.91	0.99	1.00	
	DESIGN	d	mm	243.0	264.0	243.0	
		Ac	mm ²	507	327	777	
		As	mm ²			29	
	TOP STEEL Layer 1			2 R 16	2 R 16	2 R 16	
		As prov	mm ²	603	402	603	
	BTM STEEL Layer 1			2 R 16	2 R 16	2 R 16	
		As prov	mm ²	402	402	402	
	DEFLECTION	L/d		15.152	37.198	37.198	
	SHEAR	V	kN	67.5	Link Ø	73.3	
		v	N/mm ²	1.391	Ø	1.508	
		vc	N/mm ²	0.649	Nominal	0.818	
LINKS	legs	No	2	RB @ 175	RB @ 150 for 750		
CHECKS	% Ac		ok	ok	ok		
	Cover		ok	ok	ok		
	min S		ok	ok	ok		
	max S		ok	ok	ok		
	Links		ok	ok	ok		
	Main bars		ok	ok	ok		
	max V		ok	ok	ok		
	Deflection		ok	ok	ok		
SPAN 5	ACTIONS	M	kNen	65.2	51.5	85.7	
		Ed		1.00	1.00	1.00	
	DESIGN	d	mm	243.0	264.0	243.0	
		Ac	mm ²	983	598	1157	
		As	mm ²	139		423	
	TOP STEEL Layer 1			2 R 16	2 Y 16	2 R 16	
		As prov	mm ²	603	402	603	
	BTM STEEL Layer 1			2 R 16	2 R 16	2 R 16	
		As prov	mm ²	402	402	402	
	DEFLECTION	L/d		18.939	As prov	603	
	SHEAR	V	kN	87.1	Allowed	28.896	
		v	N/mm ²	1.733	Link Ø	Ø	
		vc	N/mm ²	0.649	Nominal	1.834	
LINKS	legs	No	2	RB @ 175	RB @ 105 for 1155		
CHECKS	% Ac		ok	ok	ok		
	Cover		ok	ok	ok		
	min S		ok	ok	ok		
	max S		ok	ok	ok		
	Links		ok	ok	ok		
	Main bars		ok	ok	ok		
	max V		ok	ok	ok		
	Deflection		ok	ok	ok		
SPAN 6	ACTIONS	M	kNen	89.8	65.6	0.0	
		Ed		1.00	1.00	1.00	
	DESIGN	d	mm	243.0	264.0	243.0	
		Ac	mm ²	1212	820	0	
		As	mm ²	983	480		
	TOP STEEL Layer 1			2 R 16	2 R 16	2 R 16	
		As prov	mm ²	603	402	402	
	BTM STEEL Layer 1			2 R 16	2 R 16	2 R 16	
		As prov	mm ²	402	402	402	
	DEFLECTION	L/d		17.045	As prov	603	
	SHEAR	V	kN	101.8	Allowed	22.384	
		v	N/mm ²	2.095	Link Ø	Ø	
		vc	N/mm ²	0.649	Nominal	1.312	
LINKS	legs	No	2	RB @ 175	RB @ 175 for 700		
CHECKS	% Ac		ok	ok	ok		
	Cover		ok	ok	ok		
	min S		ok	ok	ok		
	max S		ok	ok	ok		
	Links		ok	ok	ok		
	Main bars		ok	ok	ok		
	max V		ok	ok	ok		
	Deflection		ok	ok	ok		

Project	PROPOSED OFFICE BUILDING		
Client	GASABO GOLD REFINERY LTD		
Location	KIGALI CITY-GASABO DISTRICT-BUMBOGO SECTO		
	CONTINUOUS BEAM (Analysis & Design) to BS 8110:1997		
	Originated from RCC41.xls v2.1 on CD © 1999-2003 BCA for RCC		
	Made by	Date	Page
	Eng.YANICK.	Sep-24	
	Checked	Revision	Job No
			0

APPROXIMATE WEIGHT of REINFORCEMENT

	Location	No	Type	Dia	Length	Unit wt	Weight
TOP STEEL	Support 1	2	R	16	1725	1.578	5.4
	Span 1	2	R	16	3350	1.578	10.6
	Support 2	2	R	16	2400	1.578	7.6
	Span 2	2	R	16	3350	1.578	10.6
	Support 3	2	R	16	2400	1.578	7.6
	Span 3	2	R	16	3350	1.578	10.6
	Support 4	2	R	16	2400	1.578	7.6
	Span 4	2	R	16	3350	1.578	10.6
	Support 5	2	R	16	2700	1.578	8.5
	Span 5	2	R	16	3750	1.578	11.8
	Support 6	2	R	16	2850	1.578	9.0
	Span 6	2	R	16	3550	1.578	11.2
	Support 7	2	R	16	1975	1.578	6.2
BOTTOM STEEL	Support 1	2	R	16	1175	1.578	3.7
	Span 1	2	R	16	3750	1.578	11.8
	Support 2	2	R	16	2000	1.578	6.3
	Span 2	2	R	16	3750	1.578	11.8
	Support 3	2	R	16	2000	1.578	6.3
	Span 3	2	R	16	3750	1.578	11.8
	Support 4	2	R	16	2000	1.578	6.3
	Span 4	2	R	16	3750	1.578	11.8
	Support 5	2	R	16	2000	1.578	6.3
	Span 5	2	R	16	4750	1.578	15.0
	Support 6	2	R	16	2000	1.578	6.3
	Span 6	2	R	16	4350	1.578	13.7
	Support 7	2	R	16	975	1.578	3.1
LINKS	Span 1	24	R	8	875	0.395	8.3
	Span 2	25	R	8	875	0.395	8.6
	Span 3	24	R	8	875	0.395	8.3
	Span 4	24	R	8	875	0.395	8.3
	Span 5	38	R	8	875	0.395	13.1
	Span 6	37	R	8	875	0.395	12.8

SUMMARY

spacers not included

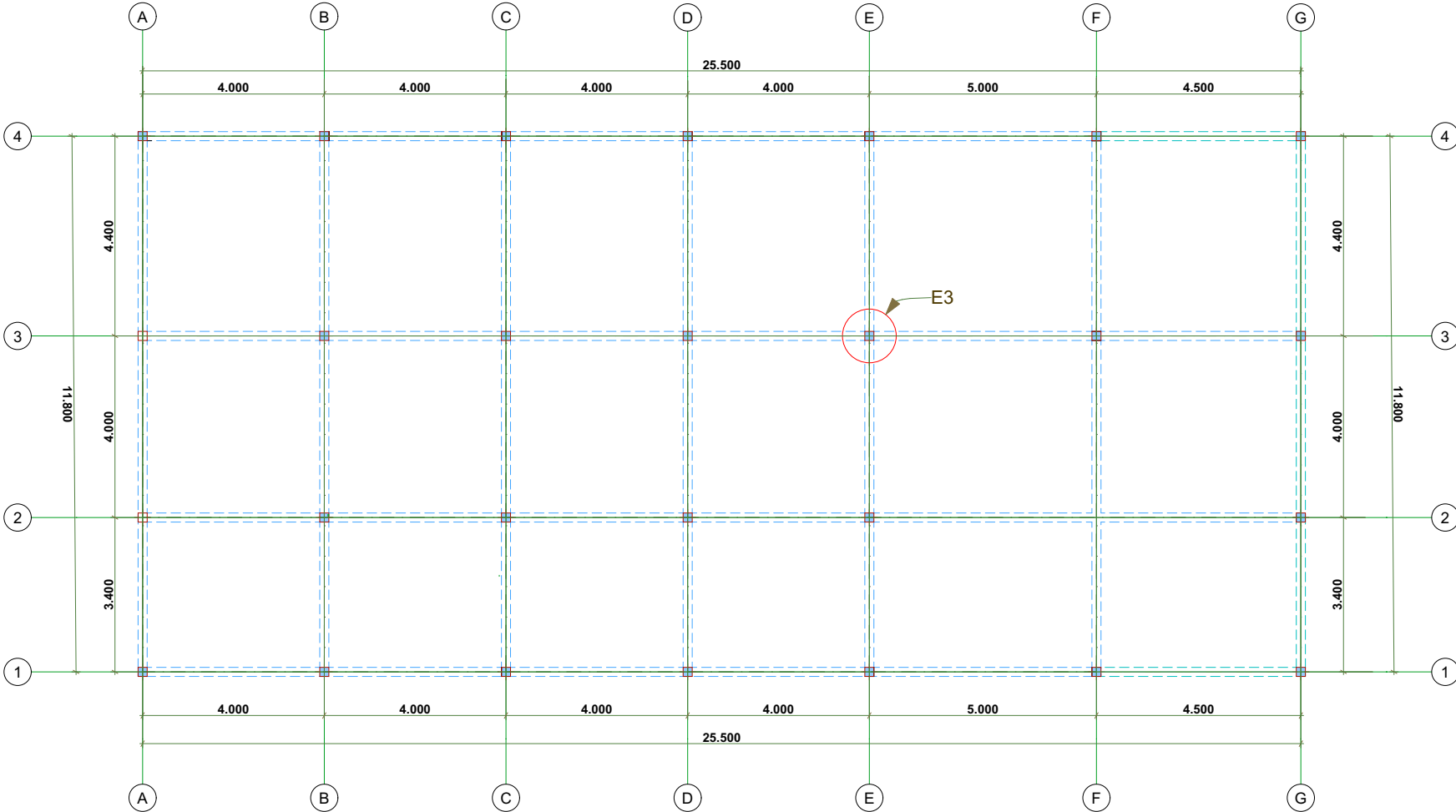
Total reinforcement in bay (kg)


291

Reinforcement density (kg/m³)

182.4

3. MOST LOADED COLUMN "E3"



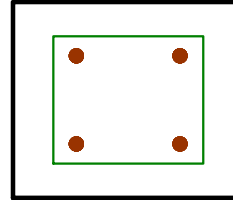
Project	PROPOSED OFFICE BUILDING				
Client	GASABO GOLD REFINERY LTD		Made by	Date	Page
Location	KIGALI CITY-GASABO DISTRICT-BUMBOGO SECTOR		Eng.YANICK	Sep-24	
SYMMETRICALLY REINFORCED RECTANGULAR COLUMN DESIGN, BENT ABOUT TWO AXES TO BS 8110:1997 Originated from RCC53.xls v2.1 on CD © 1999-2003 BCA for RCC			Checked	Revision	Job No
				-	

MATERIALS

fcu 30 N/mm² γm, steel 1.05 Cover to link 25 mm
 fy 410 N/mm² γm, conc 1.5 h agg 20 mm

SECTION

h 200 mm
 b 200 mm
 with 2 bars per 200 face
 and 2 bars per 200 face
 ie. 200 x 200 columns with 4 bars



RESTRAINTS

	Lo (mm)	Top	Btm	Braced ?	β	Le (mm)	Slenderness	Status
		Condition	Condition					
X-AXIS	<u>3000</u>	<u>F</u>	<u>F</u>	<u>Y</u>	0.75	2250	Lex/h = 11.25	Column is SHORT
Y-AXIS	<u>3000</u>	<u>F</u>	<u>F</u>	<u>Y</u>	0.75	2250	Ley/b = 11.25	

LOADCASES

	AXIAL	TOP MOMENTS (kNm)		BTM MOMENTS (kNm)	
	N (kN)	M ix	M iy	M ix	M iy
<u>N1</u>	<u>290</u>			<u>0.0</u>	<u>0.0</u>
<u>N2</u>				<u>0.0</u>	<u>0.0</u>
<u>N3</u>				<u>0.0</u>	<u>0.0</u>
<u>N4</u>				<u>0.0</u>	<u>0.0</u>
<u>N5</u>				<u>0.0</u>	<u>0.0</u>
<u>N6</u>				<u>0.0</u>	<u>0.0</u>

BAR ARRANGEMENTS

Bar Ø	Asc %	Link Ø	BAR CENTRES (mm)		Nuz (kN)	Checks
			200 Face	200 Face		
R 40	12.57	10	90	90	0	Asc > 6 % (3.12.6.2)
R 32	8.04	8	102	102	0	Asc > 6 % (3.12.6.2)
R 25	4.91	8	109	109	1276	ok
R 20	3.14	6	118	118	1010	ok
R 16	2.01	6	122	122	839	ok
R 12	1.13	6	126	126	707	ok

DESIGN MOMENTS (kN)

	X AXIS			Y AXIS		COMBINED		REBAR	max V *
	K	M add	Mx	M add	My	Axis	M'		
N1	0.000	0.0	2.9	0.0	0.0	X	2.9	4 R12	24.2
N2	0.000	0.0	0.0	0.0	0.0	0.0	0.0	#N/A	#DIV/0!
N3	0.000	0.0	0.0	0.0	0.0	0.0	0.0	#N/A	#DIV/0!
N4	0.000	0.0	0.0	0.0	0.0	0.0	0.0	#N/A	#DIV/0!
N5	0.000	0.0	0.0	0.0	0.0	0.0	0.0	#N/A	#DIV/0!
N6	0.000	0.0	0.0	0.0	0.0	0.0	0.0	#N/A	#DIV/0!

SEE CHARTS ON NEXT SHEET

Project PROPOSED OFFICE BUILDING



Client GASABO GOLD REFINERY LTD
Location KIGALI CITY-GASABO DISTRICT-BUMBOGO SECTOR
SYMMETRICALLY REINFORCED RECTANGULAR COLUMN DESIGN,
BENT ABOUT TWO AXES TO BS 8110:1997

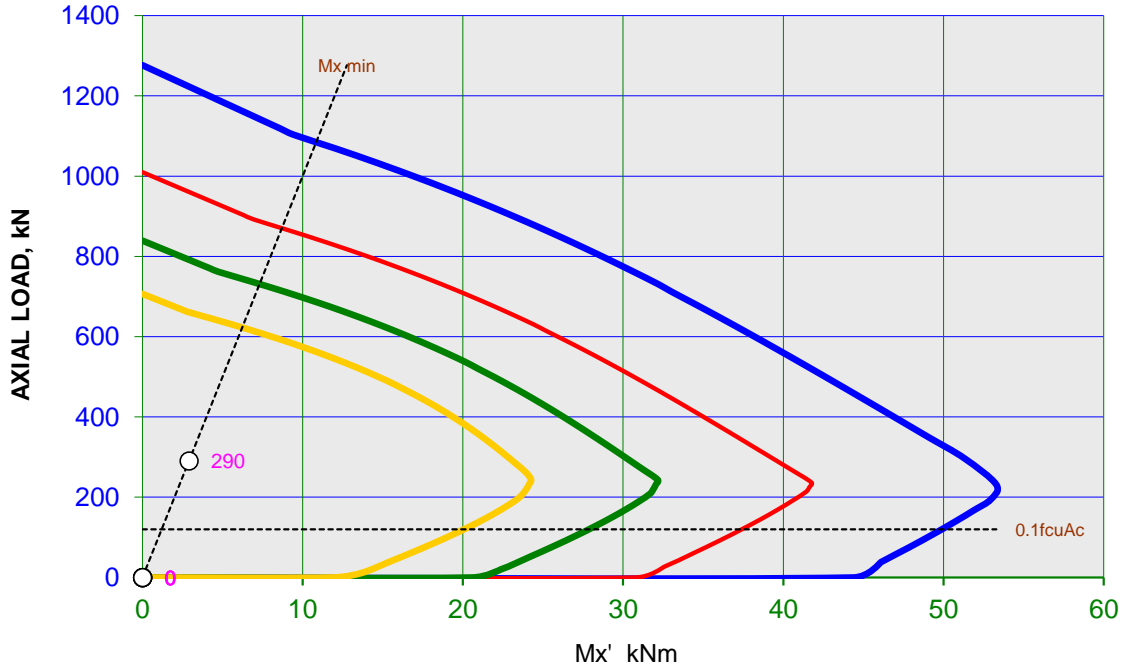
Made by	Date	Page
Eng. YANICH	28-Sep-24	
Checked	Revision	Job No
	-	

Originated from RCC53.xls v2.1 on CD

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N:M interaction chart: Mx' critical

200 x 200 column (h x b), grade C30, 25 mm cover

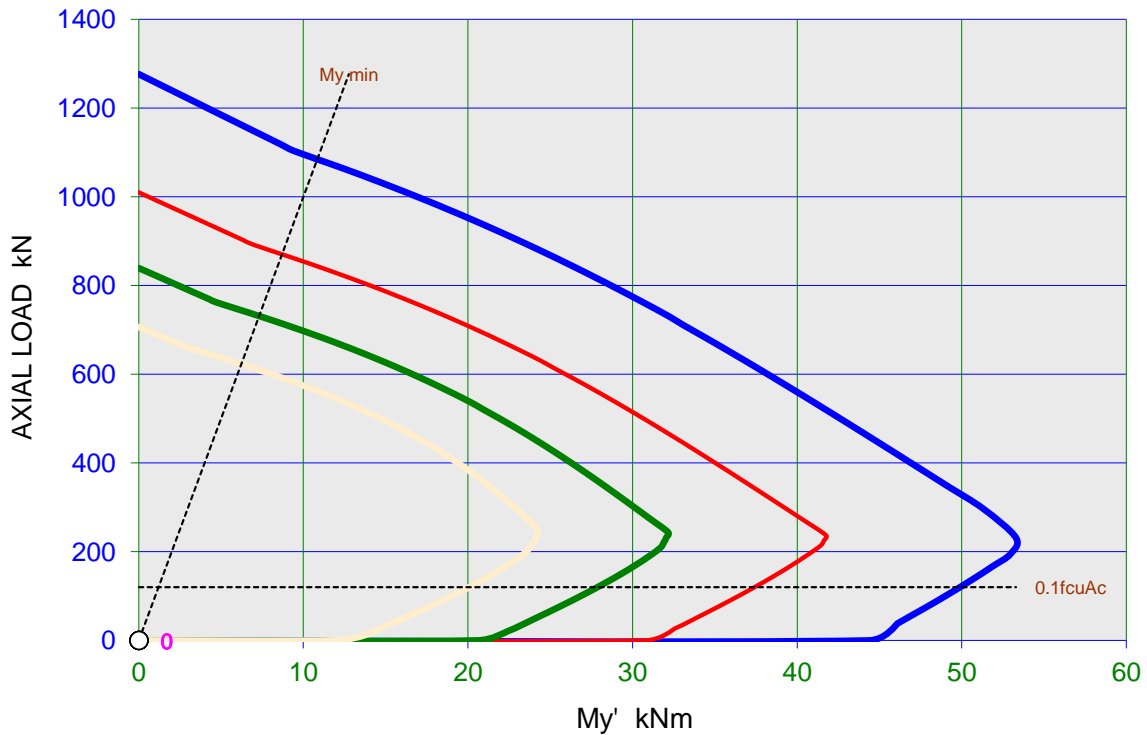


KEY

- 4R25
- 4R20
- 4R16
- 4R12

N:M interaction chart: My' critical

200 x 200 column (h x b), moment about yy axis), Grade C30, 25 Cover



KEY

- 4R25
- 4R20
- 4R16
- 4R12

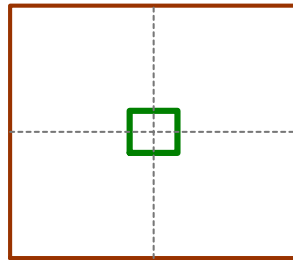
Project **PROPOSED OFFICE BUILDING**
 Client **GASABO GOLD REFINERY LTD**
 Location **KIGALI CITY-GASABO DISTRICT-BUMBOX** **Single column base**
 PAD FOUNDATION DESIGN to BS 8110:1997
 Originated from **RCC81.xls** v on CD © 1999-2003 BCA for RCC

Made by Eng. YANICK.	Date Sep-24	Page .
Checked	Revision -	Job No .

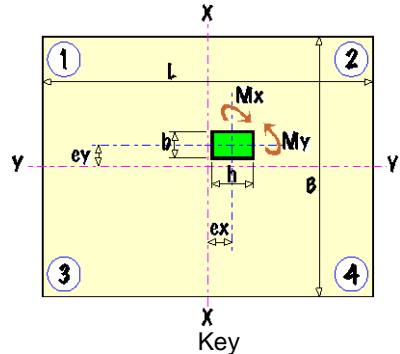
f_{cu} **25** N/mm² h agg **25** mm γ_c **1.5** concrete
 f_y **410** N/mm² cover **50** mm γ_s **1.05** steel
 Densities - Concrete **24** kN/m³ Soil **18** kN/m³
 Bearing pressure **380** kN/m² (net allowable increase)

DIMENSIONS mm

BASE **COLUMN**
 L = **1200** h = **200**
 B = **1200** b = **200**
 depth H = **400**
 ex = **0** ey = **0**



Plot (to scale)



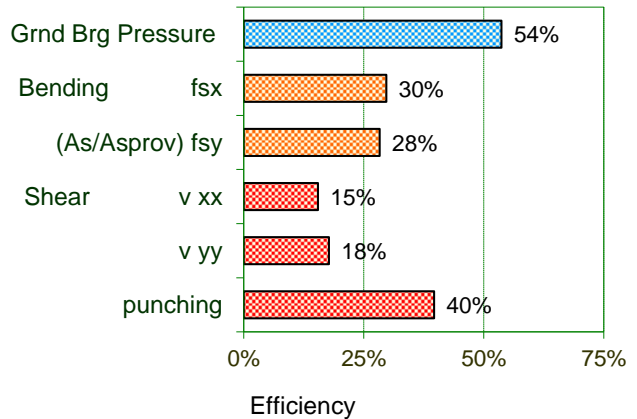
COLUMN REACTIONS kN, kNm characteristic

	DEAD	IMPOSED	WIND
Axial (kN)	242.3	48.0	
Mx (kNm)			
My (kNm)			
Hx (kN)			
Hy (kN)			

STATUS **VALID DESIGN**

BEARING PRESSURES kN/m² characteristic

CORNER	1	2	3	4
no wind	204.0	204.0	204.0	204.0
with wind	204.0	204.0	204.0	204.0



REINFORCEMENT

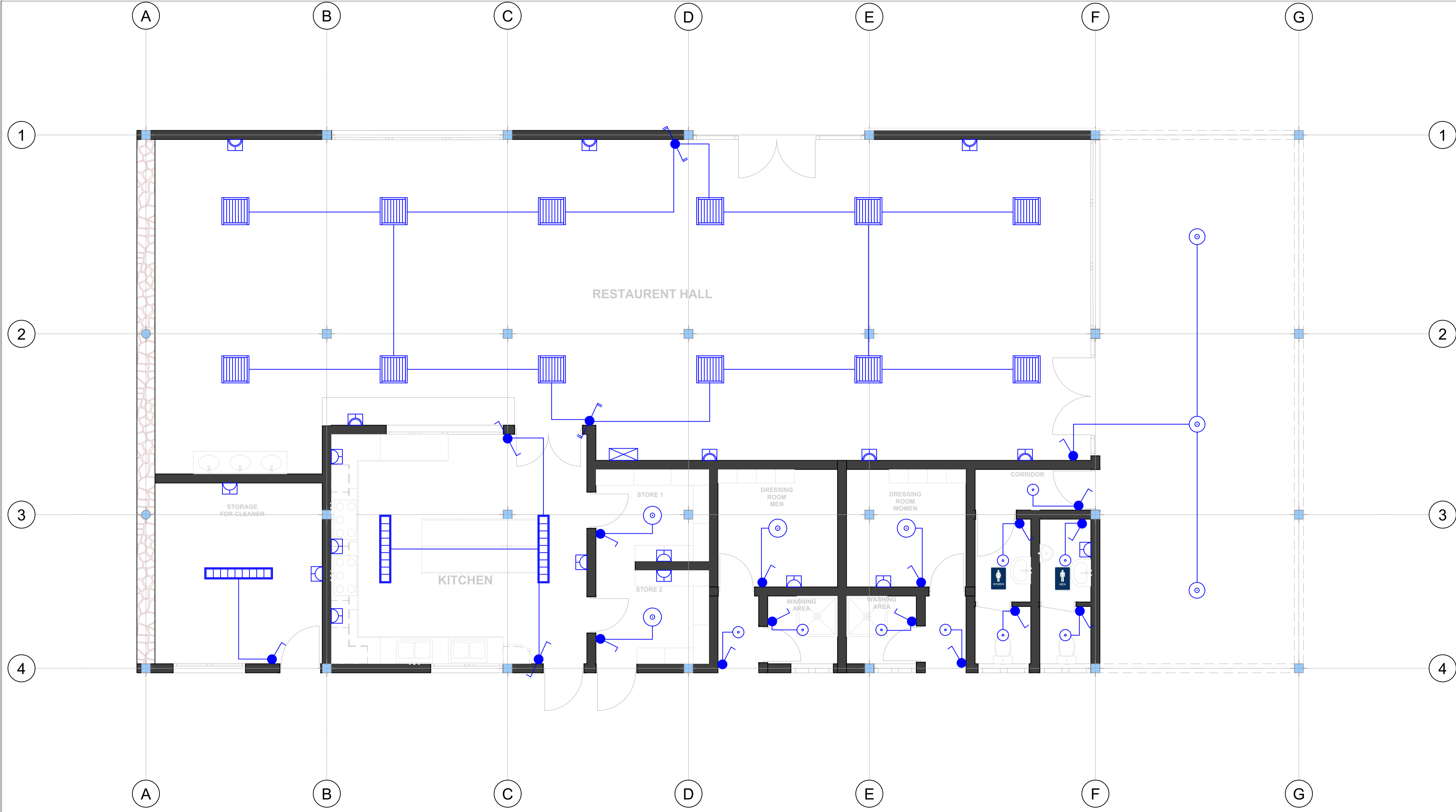
$M_{xx} = 43.3$ kNm $M_{yy} = 43.3$ kNm
 $b = 1200$ mm $b = 1200$ mm
 $d = 342$ mm $d = 326$ mm
 $A_s = 342$ mm² $A_s = 358$ mm²
PROVIDE 10 R12 @ 125 B1 **PROVIDE 10 R12 @ 125 B2**
 $A_s \text{ prov} = 1130$ mm² $A_s \text{ prov} = 1130$ mm²

BEAM SHEAR

$V_{xx} = 55.5$ kN at d from col face $V_{yy} = 62.4$ kN at d from col face
 $v = 0.135$ N/mm² $v = 0.160$ N/mm²
 or $V_{xx} = 0.0$ kN at 2d from col face or $V_{yy} = 0.0$ kN at 2d from col face
 $v = 0.000$ N/mm² $v = 0.000$ N/mm²
 $vc = 0.437$ N/mm² $vc = 0.449$ N/mm²

PUNCHING SHEAR

$d \text{ ave} = 334$ mm $u \text{ crit} = 0$ mm
 $A_s \text{ prov} = 0.301$ % $v \text{ max} = 1.586$ N/mm² at col face
 $v = 0.000$ N/mm² $vc = 0.443$ N/mm²



LEGEND	
SYMBOLS	DESCRIPTION
	LUMINAIRE TYPE A Surface mounted LED tube louvers light fitting .IP65,1800lm,36w 4000k
	LUMINAIRE TYPE B 600X600mm ceiling recessed 36W LED panel fittings 3400lm IP 20
	LUMINAIRE TYPE C Ceiling recessed mounted LED downlight Fitting, 1500lm 12W ,3000k.
	LUMINAIRE TYPE D surface mounted LED downlight Fitting, 1500lm 15W ,4000k.
	16A 1 gang 1way switch
	16A 2gang 1way switch
	16A 1gang 2way switch
	16A 2gang 2way switch
	16A switched socket outlet
	16A switched double socket outlet
	TPN distribution board



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 PO.BOX: 6428

PROJECT: OFFICE BUILDING CONSTRUCTION
 CLIENT: GASABO GOLD REFINERY. LTD
 ADDRESS
 Gasabo DISTRICT
 kigali city
 RWANDA

Modified by
Eng. R. Charles
 24-09-2024

Checked by
 24-09-2024

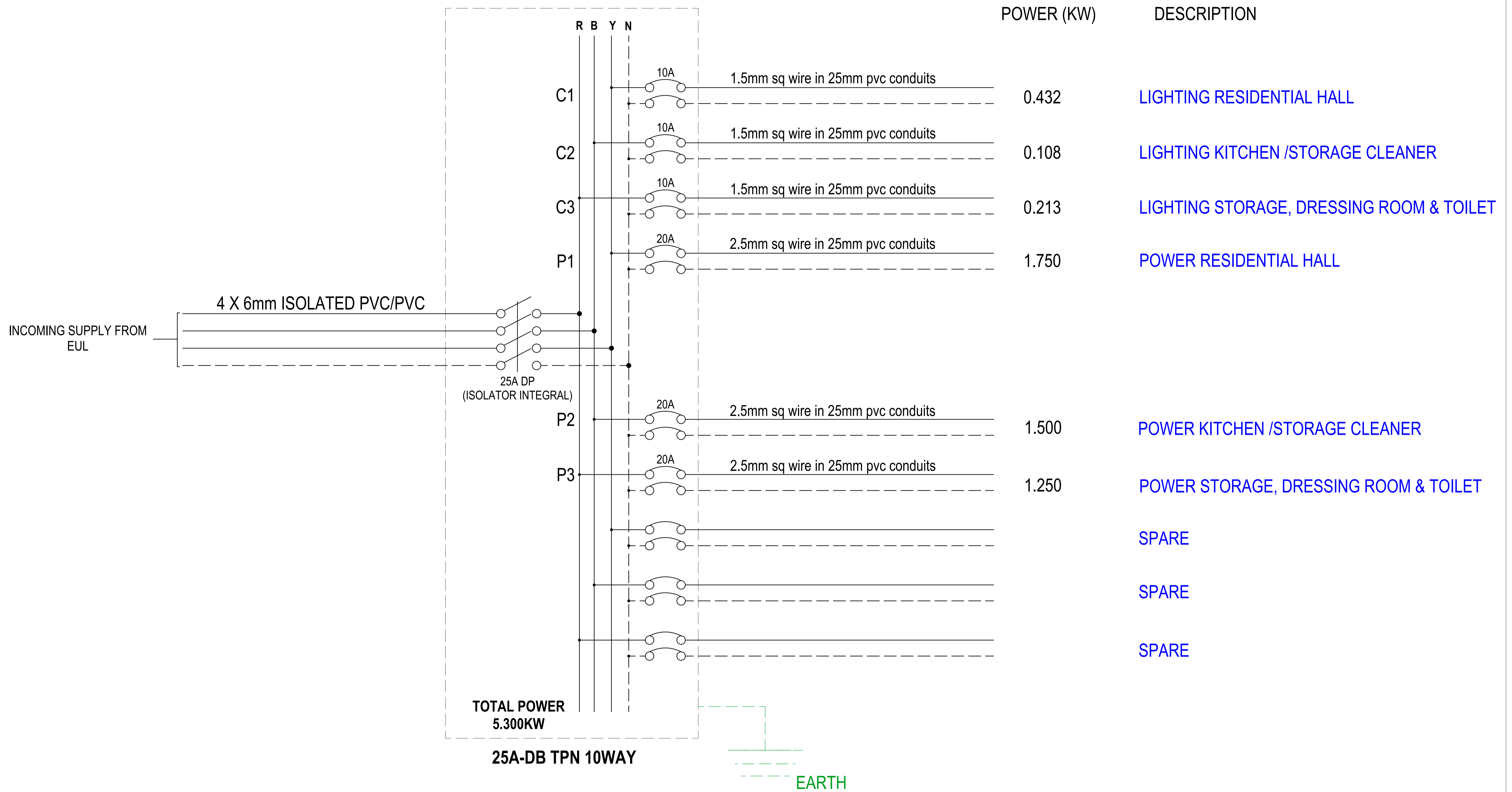
Drawing Name
 ELECTRICAL

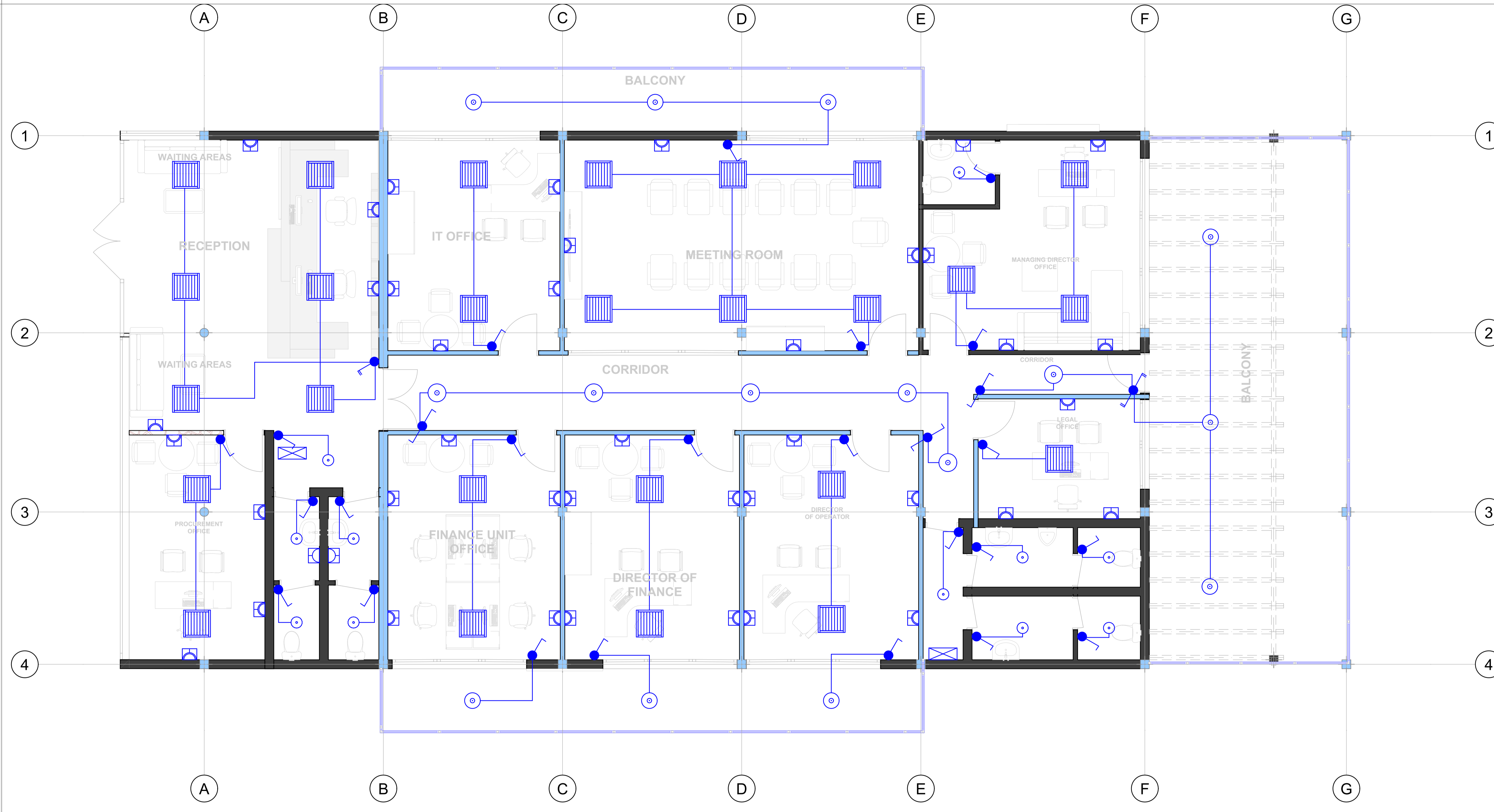
Electrical drawing

Drawing Scale
1:44.78, 1:100

Layout ID
E-100:

Revision





LEGEND	
SYMBOLS	DESCRIPTION
	LUMINAIRE TYPE A Surface mounted LED tube louvers light fitting ,IP65,1800lm,36w 4000k
	LUMINAIRE TYPE B 600X600mm ceiling recessed 36W LED panel fittings 3400Lm IP 20
	LUMINAIRE TYPE C Ceiling recessed mounted LED downlight Fitting, 1500lm 12W ,3000k.
	LUMINAIRE TYPE D surface mounted LED downlight Fitting, 1500lm 15W ,4000k.
	16A 1 gang 1way switch
	16A 2gang 1way switch
	16A 1gang 2way switch
	16A 2gang 2way switch
	16A switched socket outlet
	16A switched double socket outlet
	TPN distribution board



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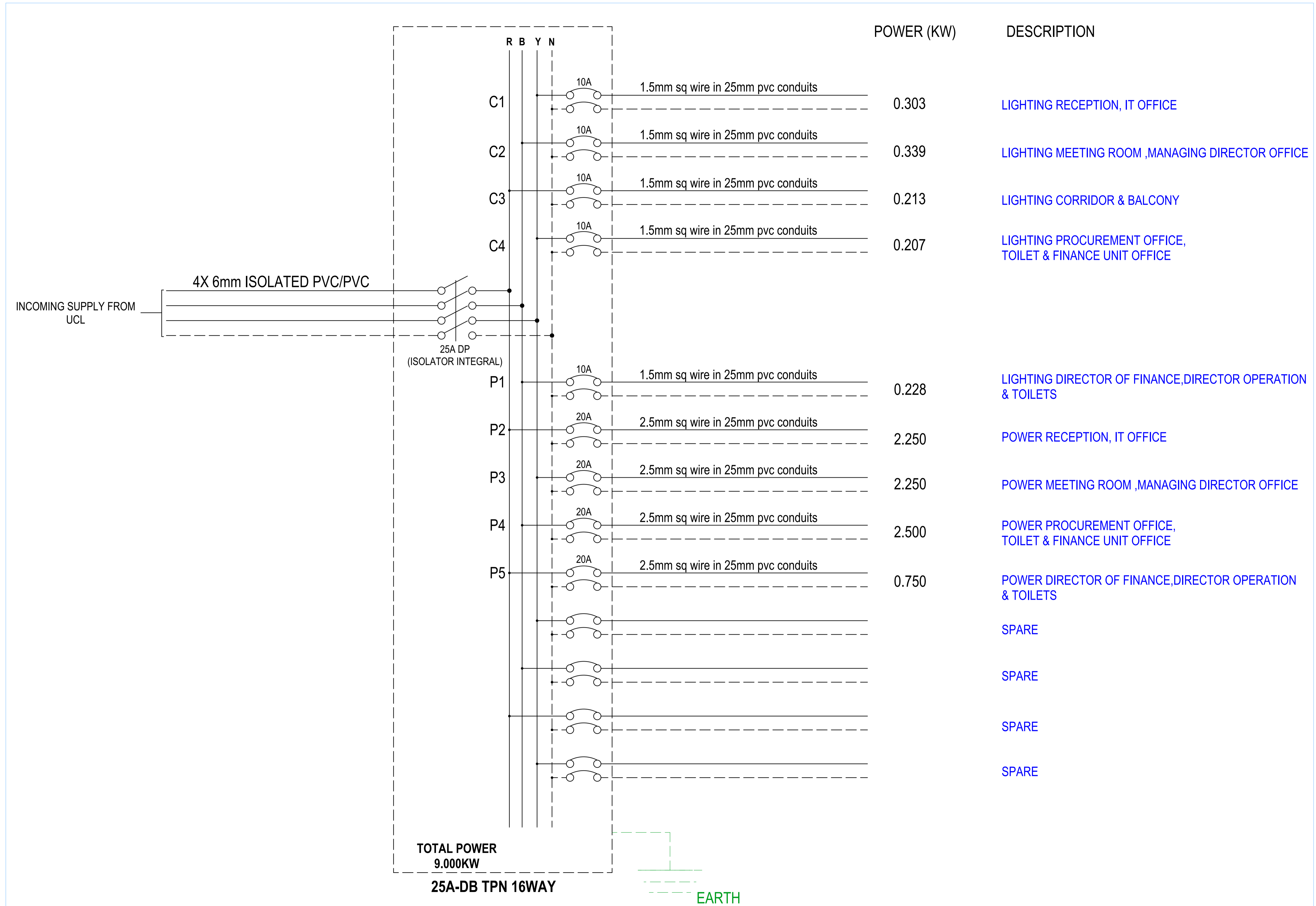
Drawing Name
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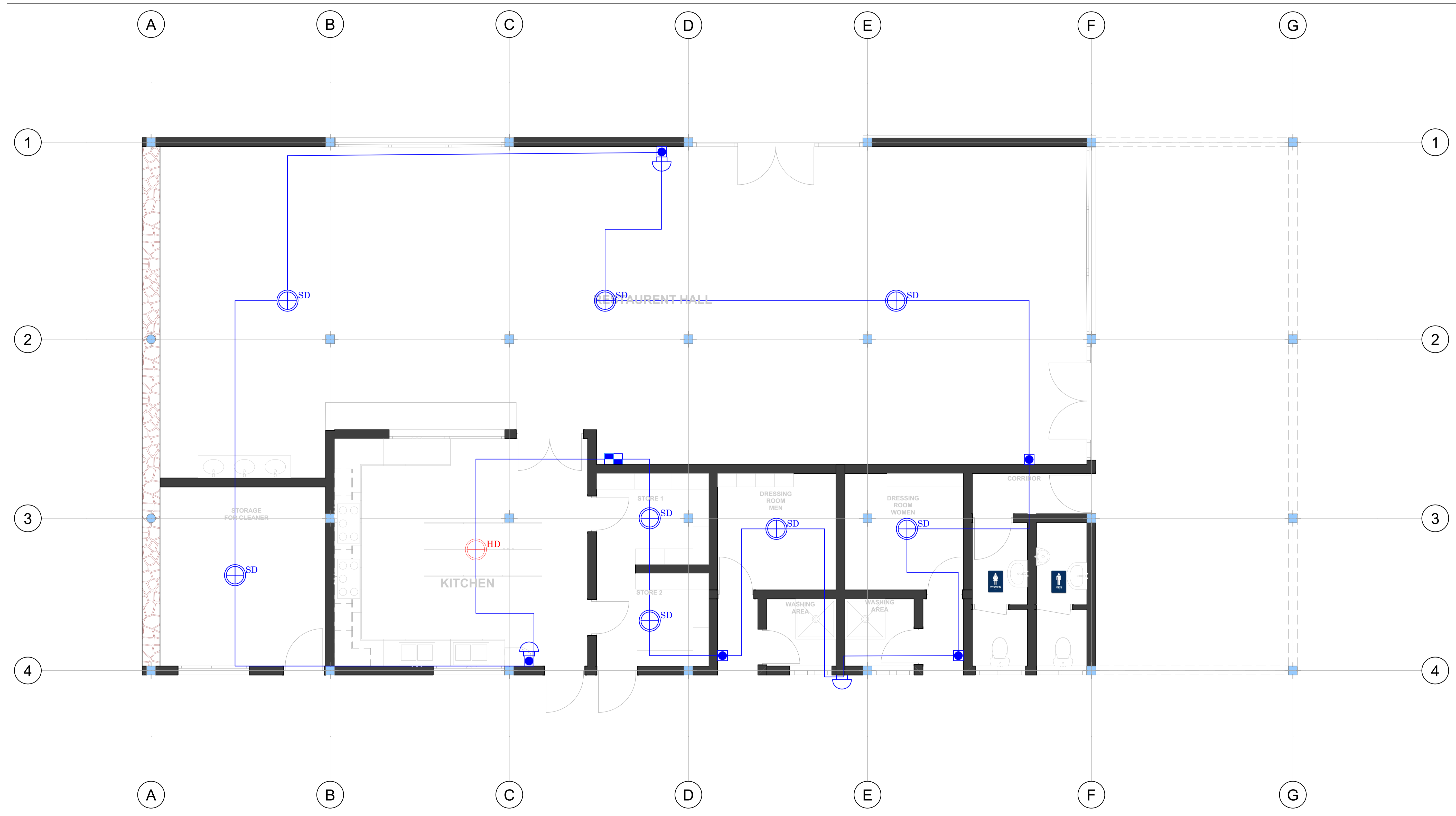
Electrical drawing

Drawing Scale
1:46.65, 1:100

Layout ID
E-102:

Revision





LEGEND	
Symbols	Description
	Smoke detector 100 ² coverage
	Heat detector 100 ² coverage
	Manual Call point
	Electronic sounder
	Fire Alarm Control Panel



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Modified by
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24-09-2024

Checked by

24-09-2024

Drawing Name
 ELECTRICAL

Fire alarm system

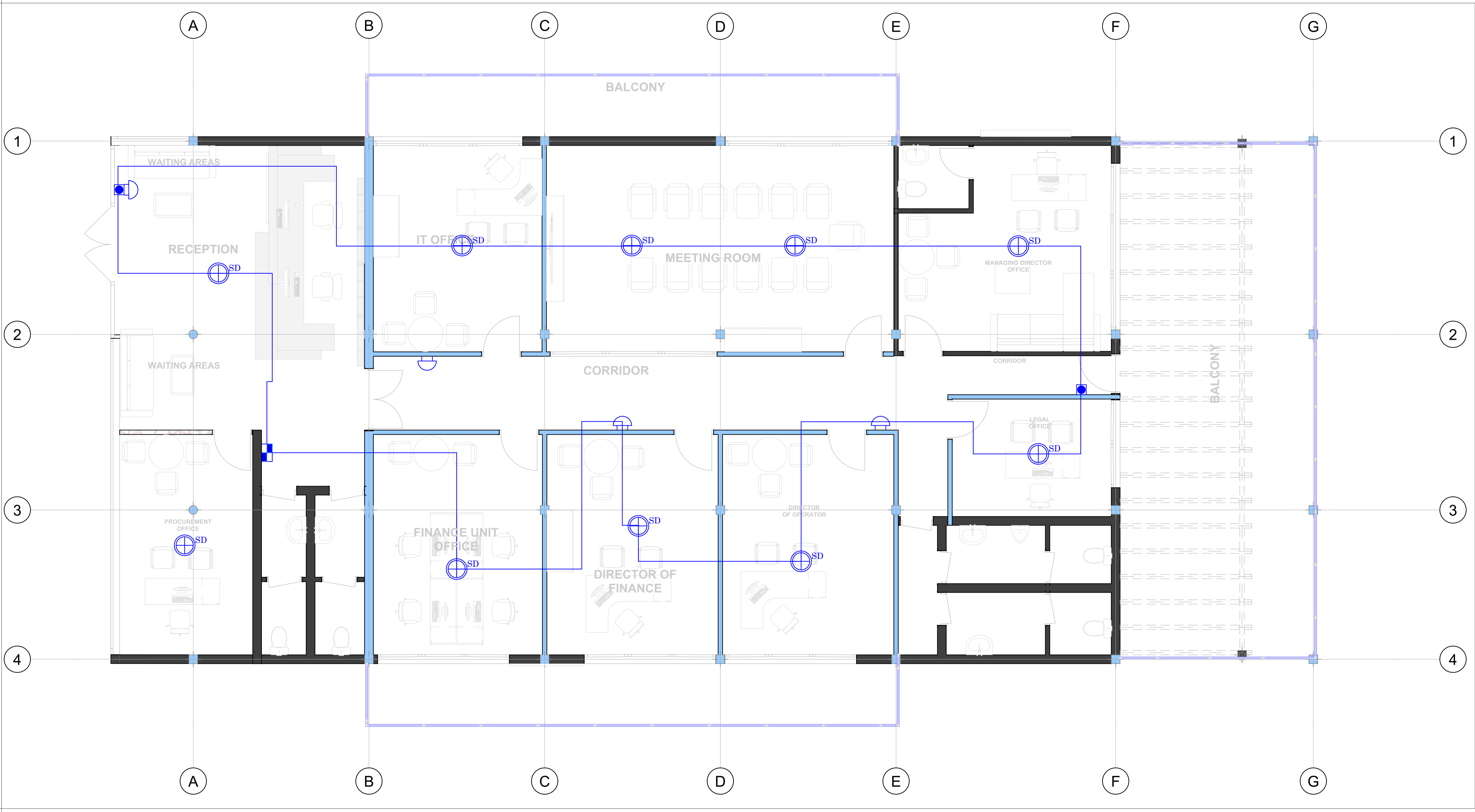
Drawing Scale

1:43.37, 1:66.63

Layout ID

FA-100:

Revision



LEGEND	
Symbols	Description
	Smoke detector 100 ² coverage
	Heat detector 100 ² coverage
	Manual Call point
	Electronic sounder
	Fire Alarm Control Panel



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PROJECT: OFFICE BUILDING CONSTRUCTION
 CLIENT: GASABO GOLD REFINERY.LTD
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Drawing Name
 ELECTRICAL

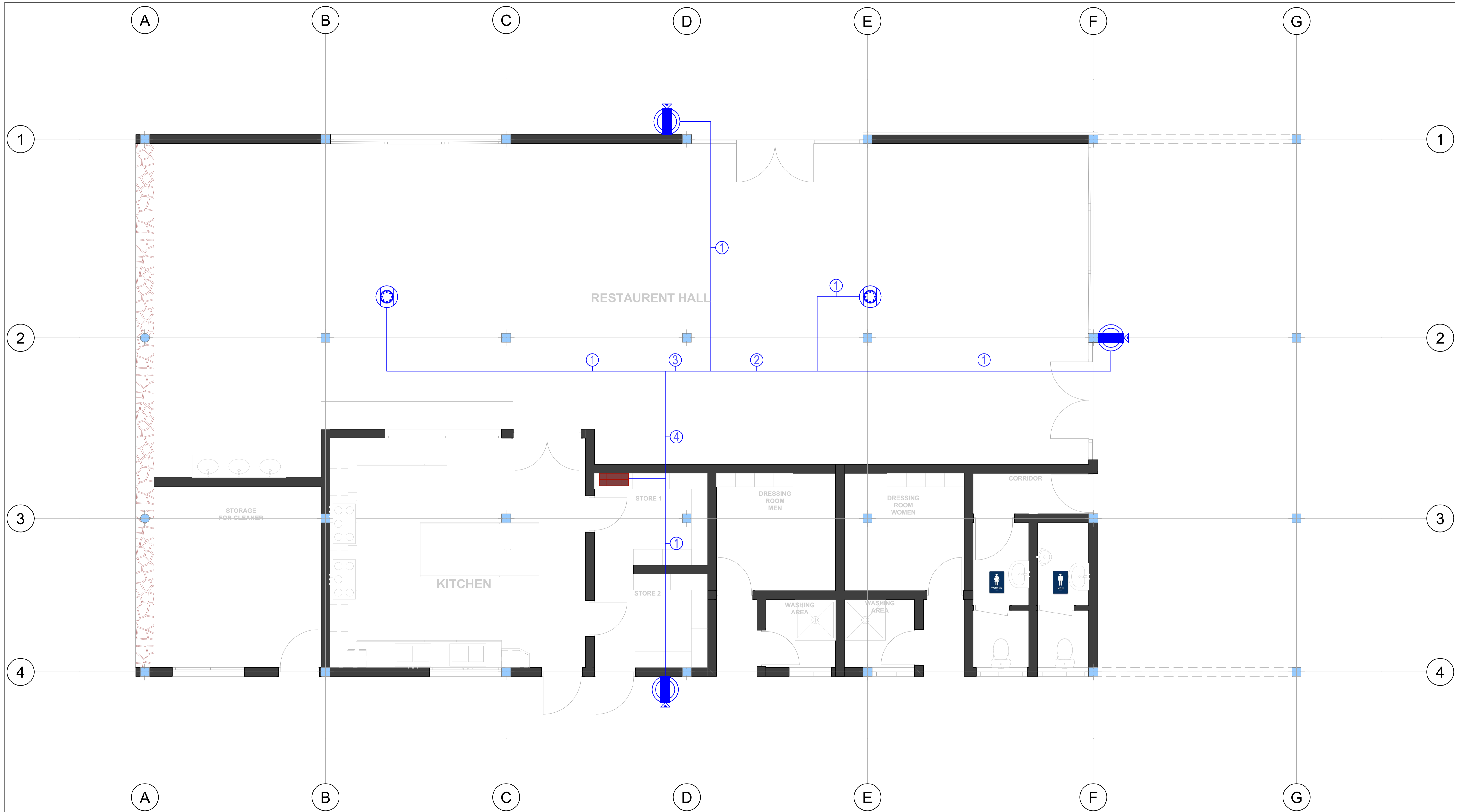
Fire alarm system

Drawing Scale
1:59.37, 1:45.11

Layout ID
FA-101:

Revision

LEGEND	
SYMBOL	DESCRIPTION
	Bullet 6MP Optical Zoom PoE IP Focus Camera Vandal proof wall mounted outdoor camera.
	6MP Optical Zoom PoE IP DOME Camera Vandal proof Surface/ceiling mounted indoor camera.
	UTP CAT 7 0.5/4PX1---15PX4 o



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PROJECT: OFFICE BUILDING CONSTRUCTION
 CLIENT: GASABO GOLD REFINERY. LTD
 ADDRESS
 Gasabo DISTRICT
 kigali city
 RWANDA

Modified by
Eng. R. Charles

24-09-2024

Checked by

24-09-2024

Drawing Name
 ELECTRICAL

Security system

Drawing Scale

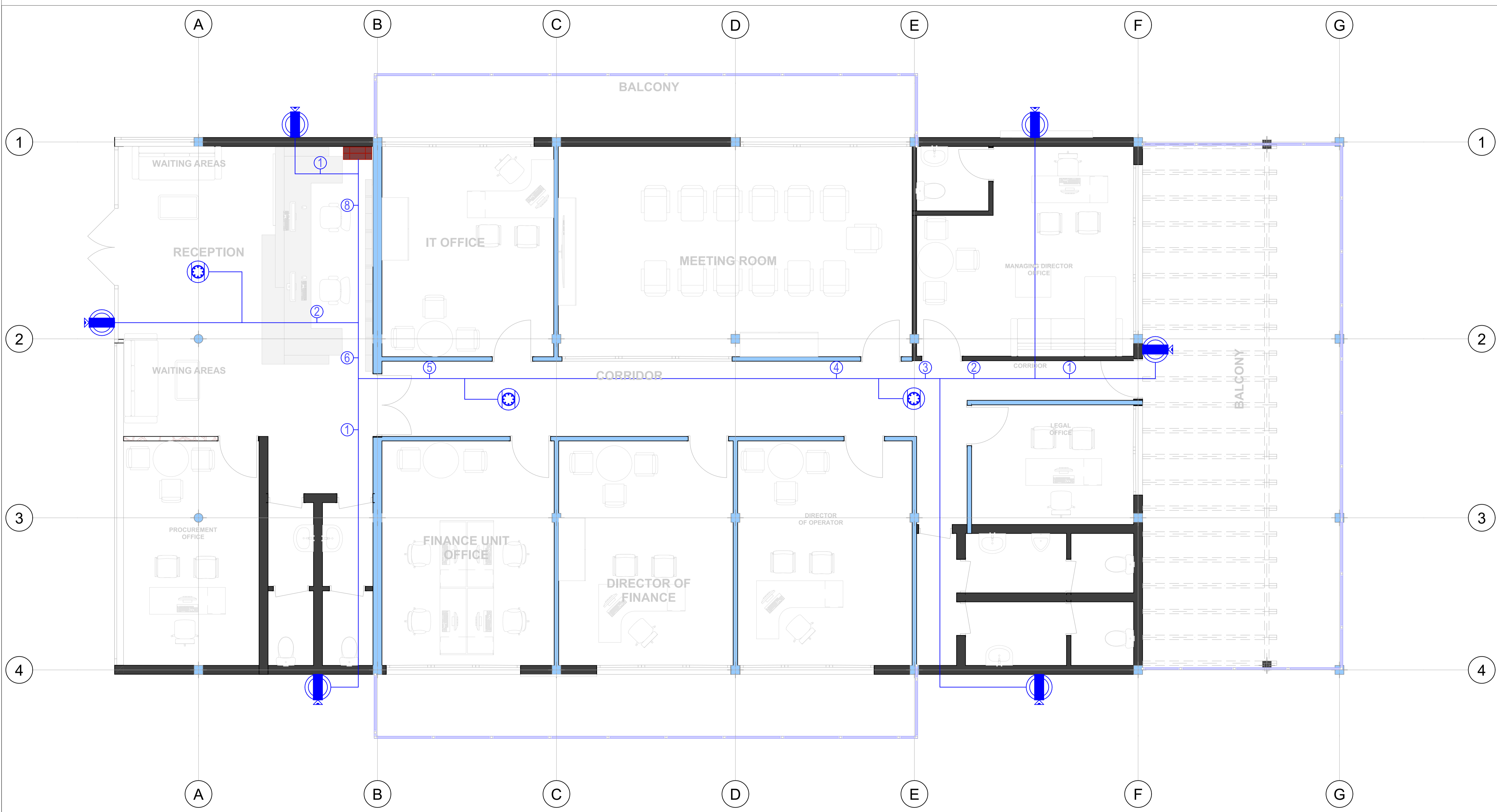
1:87.93, 1:40.11

Layout ID

SS-100:

Revision

LEGEND	
SYMBOL	DESCRIPTION
	Bullet 6MP Optical Zoom PoE IP Focus Camera Vandal proof wall mounted outdoor camera.
	6MP Optical Zoom PoE IP DOME Camera Vandal proof Surface/ceiling mounted indoor camera.
	UTP CAT 7 0.5/4PX1---15PX4 o



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PROJECT: OFFICE BUILDING CONSTRUCTION
 CLIENT: GASABO GOLD REFINERY. LTD
 ADDRESS
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Eng. R. Charles
 24-09-2024

Checked by
 24-09-2024

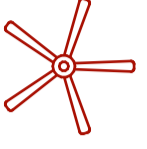

Drawing Name
 ELECTRICAL




Security system

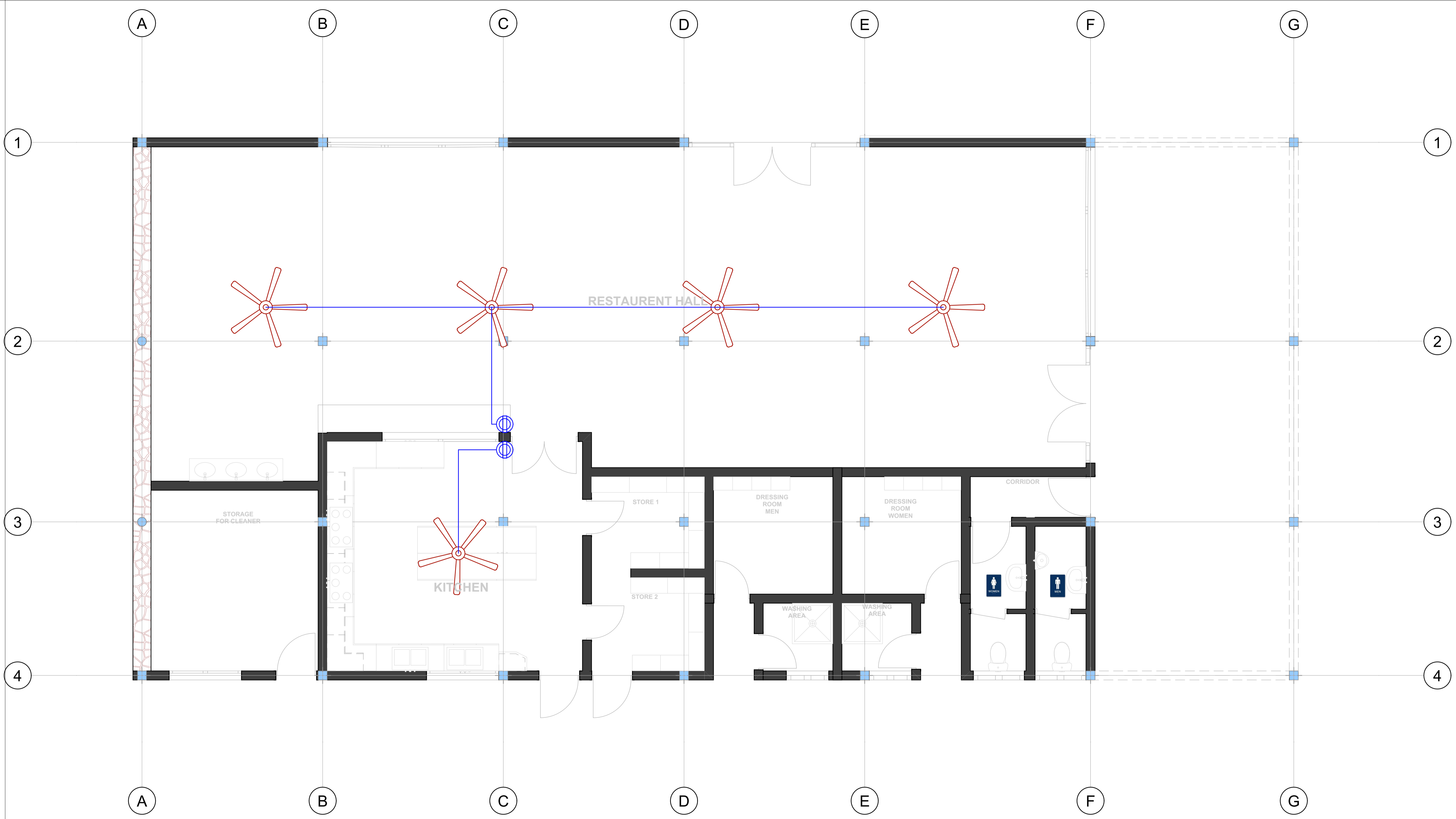
Drawing Scale
1:93.72, 1:41.01

Layout ID
ss-100:

Revision

LEGEND	
SYMBOL	DESCRIPTION
	Ceiling fan No of blades 3 Fan width 15" fan height 24" Blade material steel speed material steel speed control RF remote speed available 5 Motor RPM 600-1200 Voltage 240v/50Hz wattage 20w-90w
	Fan control switch

LEGEND	
SYMBOLS	DESCRIPTION
	WALL MOUNTED OUTDOOR AC UNIT 24000 BTU
	WALL MOUNTED INDOOR AC UNIT
	Copper pipe



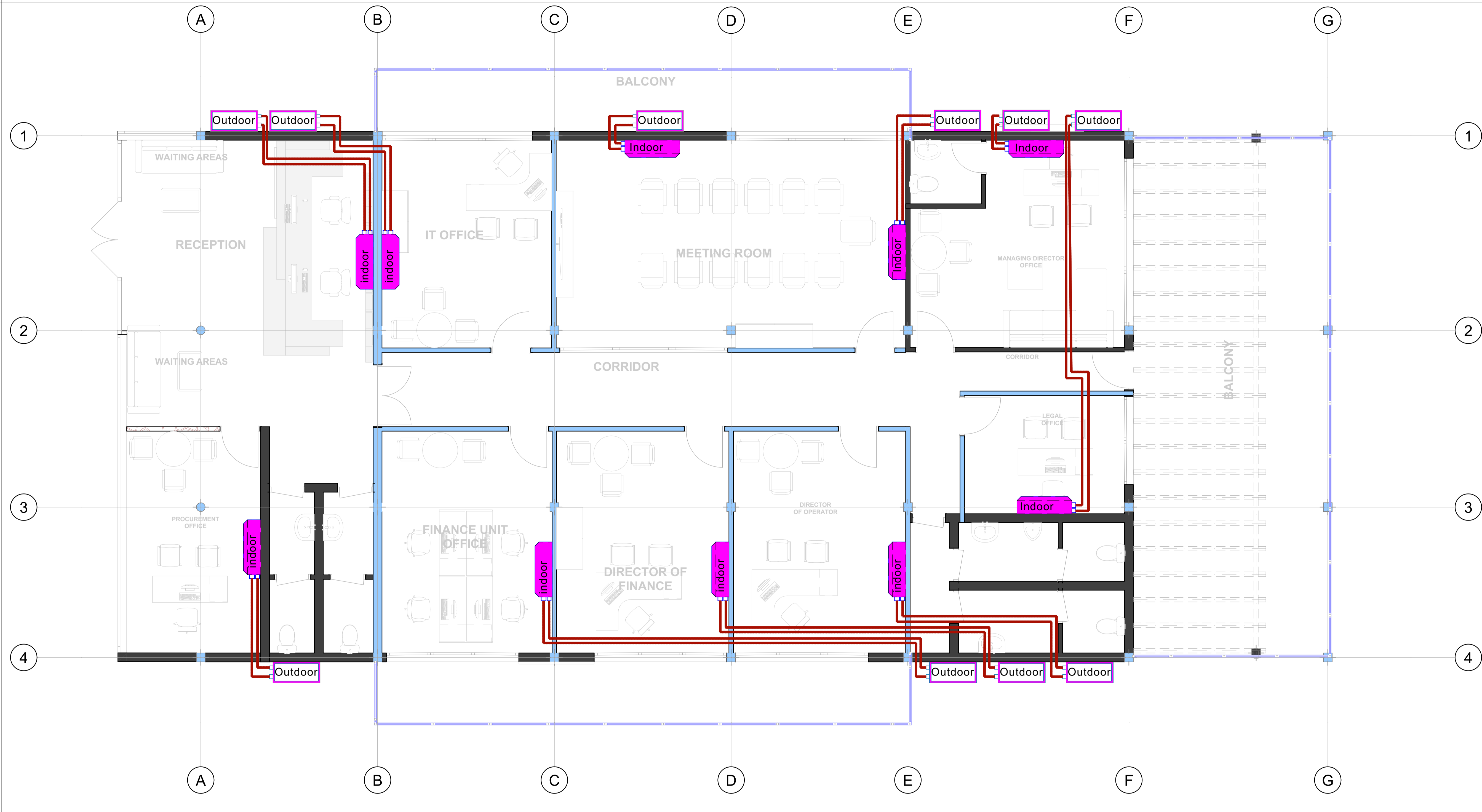
Goldstone construction .ltd
 Avenue du commerce
 Kigali city tower 14th & 15th floor
 tel: +250 788 483 502/ 788 394 552
 PO.BOX: 6428

PROJECT: OFFICE BUILDING CONSTRUCTION
 CLIENT: GASABO GOLD REFINERY. LTD
 ADDRESS
 Gasabo DISTRICT
 kigali city
 RWANDA

Modified by
Eng. R. Charles 24-09-2024
 Checked by 24-09-2024

Drawing Name
 ELECTRICAL
 Air condition

Drawing Scale
1:45.19, 1:98.51
 Layout ID
AC-100: Revision



LEGEND	
SYMBOL	DESCRIPTION
	Ceiling fan No of blades 3 Fan width 15" fan height 24" Blade material steel speed control RF remote speed material steel speed available 5 Motor RPM 600-1200 Voltage 240v/50Hz wattage 20w-90w
	Fan control switch
LEGEND	
SYMBOLS	DESCRIPTION
	WALL MOUNTED OUTDOOR AC UNIT 24000 BTU
	WALL MOUNTED INDOOR AC UNIT
	Copper pipe



Goldstone construction .ltd
 Avenue du commerce
 Kigali city tower 14th & 15th floor
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 P.O.BOX: 6428

PROJECT: OFFICE BUILDING CONSTRUCTION
 CLIENT: GASABO GOLD REFINERY.LTD
 ADDRESS
 Gasabo DISTRICT
 kigali city
 RWANDA

Modified by
Eng. R. Charles
 24-09-2024

Checked by
 24-09-2024

Drawing Name
 ELECTRICAL

Air condition

Drawing Scale
1:47.18, 1:98.51

Layout ID
AC-101:

Revision

LEGEND	
SYMBOLS	DESCRIPTION
	CO ₂ Fire Extinguisher
	Dry Powder Fire Extinguisher



Goldstone construction .ltd
 Avenue du commerce
 Kigali city tower 14th & 15th floor
 tel: +250 788 483 502/ 788 394 552
 PO.BOX: 6428

PROJECT: OFFICE BUILDING CONSTRUCTION
 CLIENT: GASABO GOLD REFINERY. LTD
 ADDRESS
 Gasabo DISTRICT
 kigali city
 RWANDA

Modified by
Eng. R. Charles
 24-09-2024

Checked by
 24-09-2024

Drawing Name
 ELECTRICAL

Fire Safety

Drawing Scale
1:44.67, 1:68.75

Layout ID
FS-100;

Revision



LEGEND	
SYMBOLS	DESCRIPTION
	CO ₂ Fire Extinguisher
	Dry Powder Fire Extinguisher



Goldstone construction .Ltd
 Avenue du commerce
 Kigali city tower 14th & 15th floor
 tel: +250 788 483 502/ 788 394 552
 PO.BOX: 6428

PROJECT: OFFICE BUILDING CONSTRUCTION
 CLIENT: GASABO GOLD REFINERY. LTD
 ADDRESS
 Gasabo DISTRICT
 kigali city
 RWANDA

Modified by
Eng. R. Charles 24-09-2024
 Checked by 24-09-2024

Drawing Name
 ELECTRICAL
 Fire Saftey

Drawing Scale
1:67.20, 1:46.16
 Layout ID
FA-101: Revision



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Rev: 00

Approval Date: 04-OCT-2024

BIDDING DOCUMENT FOR THE TENDER FOR THE CONSTRUCTION OF OFFICES AND DINING HALL

Tender Title	Tender for the construction of offices and dining hall
Tender ref NO.	OCB/01/10/GGR/2024
Procurement Method	Open Competitive Bidding
Date of Issue:	31/10/2024

Prepare by:

A blue ink signature of Dan NGOGA.

Dan NGOGA
Dir of Procurement

Approved by

A blue ink signature of Bosco KAYOBOTSI.

Bosco KAYOBOTSI
Managing Director





No: GGR/IMS/PRO/01/FM/06

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Approval Date: 04-OCT-2024

Instructions to Bidders Instructions to Bidders (ITB)

A. Preparation of Bid

1. The Procuring Entity, as defined in **the Bid Data sheet** invites bids for the construction of Works, as **described in the BDS**.
 - 1.1. The successful Bidder shall be expected to complete the Works by the Intended Completion **Date specified in the BDS**

2. ELIGIBLE BIDDERS

- 2.1. Bidders black listed/debarred or suspended by the Rwandan Public Procurement Authority (RPPA) are not eligible to participate in this tender.
- 2.2. A bidder shall not have a conflict of interest. All bidders found to have conflict of interest shall be disqualified. Bidders may be considered to have a conflict of interest with one or more parties in this bidding process, if they are associated, or has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Procuring Entity to provide consulting services for the preparation or supervision of the works, and any of its affiliates shall not be eligible.

3. One Bid per Bidder

- 3.1. Each Bidder shall submit only one Bid individually, a partner in a joint venture not allowed. A Bidder who submits or participates in more than one Bid (other than as a subcontractor or in cases of alternatives that have been permitted or requested) shall cause all the proposals with the Bidder's participation to be disqualified.

4. Cost of Bidding

- 4.1. The bidder shall bear all costs associated with the preparation, submission of his bid, appeal fee or any other expenses that s/he may incur during procurement proceedings, and Gasabo Gold Refinery shall in no case be responsible or liable for those costs. Gasabo Gold Refinery shall not be liable for any consequences related to the rejection of all bids or the cancellation of the procurement proceedings due to the reasons provided for by the company's procurement manual, unless it is proved that it was a consequence of its irresponsible conduct

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5. Site Visit

5.1 The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

6. Format and Signing of Bid

- 6.1. The Bidder shall prepare one original of the documents composing the Bid as described in ITB 7 and tender notice
- 6.2. The Bidder shall provide information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

7. Clarification to the Bidding Documents

- 7.1. Any bidder may request in writing to the procuring entity, at its address **mentioned in the BDS**, for clarifications on the bidding document. The Procuring Entity shall respond to any request for clarification within three (3) days from the day of its reception. The Procuring Entity shall communicate and forward, without disclosing the source of the request for clarification, to all bidders the copies of the clarifications that were given in response to the request by the Procuring Entity.

B. Submission of Bids

8. Submission, Sealing and Marking of Bids

- 8.1. Bidders will only submit their bids to the place indicated in the tender notice or to any other place that has been officially communicated to them after the tender notice was issued. The bidder shall seal the original and all copies of the bid in two separate inner envelopes and one outer envelope, duly marking the inner envelopes as "ORIGINAL" and "COPIES."
- 8.2. The inner and outer envelopes shall be addressed to the Procuring Entity at the address **provided in the BDS**; bear the title and identification number of the tender as **defined in the BDS**
- 8.3. In addition to the identification required in ITB the outer envelope shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared late,

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8.4. If the outer envelope is not sealed and marked as above, the Procuring Entity shall assume no responsibility for the misplacement or premature opening of the bid. If the outer envelope is accidentally opened by the procuring entity but the inner envelopes not opened, the bidder shall not claim that information in his/her bid have been accessed

9. Deadline for Submission of Bids

9.1. Bids shall be delivered to the Procuring Entity at the address specified above no later than the time and date specified in the BDS

9.2. Any bid received by the Procuring Entity after the deadline shall be registered as a late bid with a specific time of its arrival and returned unopened to the bidder,

C. Bid Opening and Evaluation.

10. Bid Opening

9.1. The Procuring Entity shall open the bids, in the presence of the bidders' representatives who choose to attend at the time and in the place **specified in the BDS and Tender notice**

10. **Bid security** as described in BDS

11. Confidentiality

11.1. No information concerning checking, explanation, opinion and comparison of bids and recommendations concerning the contract award, will be disclosed to bidders or any other person not officially involved in the process until the name of the successful bidder has been announced. Any bidder, who attempts to contact directly or indirectly during the evaluation period any member of the Internal Tender Committee or any other person involved in the evaluation process, shall be automatically disqualified.

12. Clarification of Bids

12.1. To assist in the examination, evaluation, and comparison of Bids, the Procuring Entity may, at the Procuring Entity's discretion, ask any Bidder for clarification of the Bidder's Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Procuring Entity in the evaluation of the Bids.

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13. Examination of Bids and Determination of Responsiveness

- 13.1. Prior to the detailed evaluation of bids, the evaluation committee shall determine whether each bid (a) meets the eligibility criteria (b) has been properly signed; (c) is accompanied by the bid security, and (d) is substantially responsive to the requirements of the bidding document.
- 13.2. A substantially responsive bid is one which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the works; (b) which limits in any substantial way, inconsistent with the bidding documents, the Procuring Entity's rights or the bidder's obligations under the contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.
- 13.3. If a Bid is not substantially responsive, it shall be rejected by the evaluation committee, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.
- 13.4. The procuring entity may regard a bid as responsive even if it contains minor errors that do not materially alter or depart from the characteristics, terms, conditions, and other requirements set for in the bidding notice or/and document or if it contains errors that were due to the omission that may be corrected without altering the substance of the bid. Where possible such errors shall be taken into account in the evaluation and comparison of bids.

14. Evaluation and Comparison of Bids

- 14.1. The evaluation committee shall evaluate and compare only the bids determined to be substantially responsive in evaluating the bids, the evaluation committee shall determine for each bid the evaluated bid price by adjusting the bid price as follows:
 - 14.2. excluding provisional sums and the provision, if any, for contingencies in the Bill of Quantities, but including Daywork, where priced competitively;
 - 14.3. making an appropriate adjustment for any other acceptable variations, deviations, or alternative offers submitted and
 - 14.4. making appropriate adjustments to reflect discounts or other price modifications offered in accordance
- 14.5. The Procuring Entity reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the bidding document or otherwise result in unsolicited benefits for the Procuring Entity shall not be taken into account in bid evaluation and shall not be considered against bidders who did not provide them.

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D. Award of Contract

15. Award Criteria

15.1. The Procuring Entity shall award the contract to the bidder whose bid has been selected as being substantially responsive to the bidding document and who has offered the lowest evaluated bid price, provided that such bidder has been determined to be (a) eligible in accordance with the provisions of ITB Clause 2.

15.2. Procurement Entity's Right to accept any Bid and to reject any or all Bids

15.3. Notwithstanding, the Procuring Entity reserves the right to accept or reject any bid, or to cancel the bidding process and reject all bids, at any time prior to the award of contract, in compliance with the relevant provisions of the national Law and regulations

15.4. Performance Security

15.5. After receipt of the letter of notification, the successful bidder shall provide the performance security in the form provided in the bidding document and whose amount shall depend on the contract value and nature of activities to be carried out. However, the value of the performance security shall neither be less than 5% nor more than 10% of the contract value. Upon provision of the performance security the procuring entity and the successful bidder shall sign the written contract.

15.6. If the performance security is provided by the successful bidder in the form of a bank guarantee, it shall be issued at the bidder's option, by a bank located in the Republic of Rwanda,

15.7. Failure of the successful Bidder to comply with the requirements shall constitute sufficient grounds for cancellation of the award and forfeiture of the bid security. Upon the successful bidder's provision of the performance security and signature of the written contract, the Procuring Entity shall promptly finally notify the name of the winning bidder to all unsuccessful bidders and shall discharge their bid securities

15.8. If the initial contract execution period has been extended or its value has increased, the contractor shall respectively extend the validity period of the performance security and increase its amount accordingly.

15.9. Upon amendment of the initial contract agreed between the procuring entity and the contractor, the form of the performance security may be changed but that change shall be made preserving the security continuity and without decreasing its amount.

15.10. In case the contract is not fully and/or well executed, the performance security shall be unconditionally seized by the procuring entity as compensation without prejudice to other penalties provided for by the laws

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15.11. In case the contract is successfully completed, the performance security shall be returned to the contract in ways and conditions provided for by the laws

16. Advance Payment and Security

16.1. The Procuring Entity may provide an advance payment on the contract price subject to a maximum amount, as **stated in the BDS**. The Advance Payment shall be guaranteed by a Security provides a Bank Guarantee for Advance Payment form.

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Section II: Bid Data Sheet

The following specific data for the services to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

A. General	
ITB 1	The Procuring Entity is the "GASABO GOLD REFINERY LTD" Tender Ref No; OCB/01/10/GGR/2024 "Tender for construction of staff offices and dining hall."
ITB 1.2	The Intended Maximum Completion Date is six months . Bidder is free to propose a shorter execution period. <ul style="list-style-type: none"> ✚ Detailed work plan ✚ Detailed Methodology
	The average annual turnovers of 600,000,000 Frw in 3 last years and must be certified by registered auditors and stamped
	Credit Line of 80,000,000 FRW supported by bank contract
ITB 2.1	The list of firms debarred from participating in this project is available at the Web Site of RPPA
	The Ceiling for sub contractor's participation: Subcontracting not allowed
ITB : 3.1	Joint Venture (JV): not allowed
Company's Experience	Reference: <ul style="list-style-type: none"> ✚ At least Two (2) project for construction of Infrastructures of similar nature and complexity of at least above or equal to 250,000,000Rwf supported by certificates of good completion or Final handover dual signed all supported with their contract. ✚ The period is: 5 last years of experience in the similar field
Equipments required	The essential equipment to be made available by the successful Bidder shall be: <ul style="list-style-type: none"> ✚ One concrete mixer (0.3-2m3) ✚ One vibrator ✚ Two rammer/small compactors ✚ Dumper truck (camion benne), total capacity: 10m3 ✚ Water tank truck (total capacity: 10 m3) ✚ One Compactor ✚ Surveying equipment: theodolite, site level ✚ One Pick up ✚ The bidder must provide the proof of ownership or rent (notified rent agreement)
Key personnel experience and	The key personnel for the works: <ul style="list-style-type: none"> ✚ Project Manager or Equivalent; a project manager with a master's degree in project manager and a bachelor's degree in Civil



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qualifications	<p>Engineering, architecture, Construction Management or related fields with at least Seven (7) years of experience in construction works, at least 5 years as manager of construction projects and worked as manager of projects at least in 2 projects of equal or above 250,000,000 Frw for each, join detailed CV, updated and signed with certified copies of degree, and availability and exclusivity certificate. He / She must be registered in a relevant professional body in Rwanda with a valid practicing certificate,</p> <ul style="list-style-type: none">✦ One (1) Permanent Site Engineer; with A0 in Civil Engineering, Construction Management or related fields with at least five (5) years of experience in construction as permanent site engineer and worked as site Engineer at least in 2 projects of equal or above 250,000,000 Frw for each, join detailed CV, updated and signed with certified copies of degree, and availability and exclusivity certificate. He / She must be registered in a relevant professional body in Rwanda with a valid practicing certificate,✦ Two (2) permanent site foreman; with at least A1 level in civil engineering or construction and others A2 level in public works and/or construction or construction with at least ten (10) years of experience in construction and at least eight (8) years of experience as site foreman in construction works, join detailed CVs, updated and signed with certified copies of diploma, and availability and exclusivity certificate;✦ A Surveyor holding A0 in Land Surveying with at least five (5) and with proofs of performed construction works, join detailed CVs, updated and signed with certified copies of diploma, and availability and exclusivity certificate,✦ Mechanical or Electromechanical Engineer; with A0 in Mechanical or Electromechanical Engineering with at least four (4) years of experience in construction works, join detailed CVs, updated and signed with certified copies of diploma, and availability and exclusivity certificate; He / She must be registered in the Institute of Engineers in Rwanda, with a valid practicing certificate.✦ Electricity engineer; with at least A0 in Electrical Engineering and at least of four (4) years of experience, join detailed CV, updated and signed with certified copies of diploma or degree, and availability and exclusivity certificate. He / She must be registered in the Institute of Engineers in Rwanda, with a valid practicing certificate.✦ Quantity Surveyor; with at least A0 in Quantity Surveying and at least of four (4) years of experience, join detailed CV, updated and signed
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	<p>with certified copies of diploma or degree, and availability and exclusivity certificate. He / She must be registered in the Institute of Engineers in Rwanda, with a valid practicing certificate.</p> <ul style="list-style-type: none"> ✚ Safety Manager; with at least A0 in construction related fields supported by relevant documents with at least of four (4) years of experience, join detailed CV, updated and signed with certified copies of diploma or degree, and availability and exclusivity certificate. ✚ The Company must present a healthy and safety policy Methodology (HSPM), this is a compulsory requirement
	The percentage of margin's domestic preference is: Exclusively domestic
B. Biding Documents	
ITB 6	<p>The Procuring Entity addresses for clarification is: Gasabo Gold Refinery Ltd (GGR) Kigali Special Economic Zone, Phase II Procurement office e-mail; dan.ngoga@ggr.co.rw, Tel; 0738647061/0788647061.</p>
C. Preparation of Bids	
ITB 1	<p>The language of the bid is: English</p> <p>Bidders are permitted to submit their bids in ENGLISH. Bidders shall not submit bids in more than one language. The Contract to be signed with the winning Bidder shall be written in English, which will be the language that shall govern the contractual relations between the Procuring Entity and the winning Bidder.</p>
Admin doc.	<p>Compulsory administrative documents to be submitted;</p> <ul style="list-style-type: none"> ✚ Copy of company registration certificate (Certificate of incorporation) ✚ A valid copy of contribution clearance from RSSB ✚ A valid copy of tax clearance from Rwanda Revenue authority ✚ Certificate of Good standing issued by RDB ✚ Original Bid Security of Frw 21,500,000 (Twenty-One Million Five Hundred Thousand Francs) issued by a recognised financial institution in Rwanda ✚ Proof of purchase of tender document paid to be made on account of Gasabo Gold Refinery Ltd, in BK: 1000-824-485-88, the cost is (Twenty Thousand Francs) 20 000frw (applicable to new bidders)
	Bidders <i>are not</i> required to substantiate the rates and prices.
	The Bid shall be valid for 120 days
ITB 11	Bid shall include a Bid Security issued by a recognized financial institution in



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	Rwanda
	The Bid Security amount is: Frw 21,500,000 Rwandan Francs According to the form in annex. Valid until the 30 th day after bid validity period.
	Alternative shall not be considered.
	The number of copies of the Bid shall be 1 original and 1 Copy
D. Submission of Bids	
ITB 8	The Procuring Entity's address for the purpose of Bid submission is: Gasabo Gold Refinery Ltd (GGR) Kigali Special Economic Zone, Phase II Procurement office e-mail; dan.ngoga@ggr.co.rw, Tel; 0738647061/0788647061.
ITB 8.1	The deadline for submission of bids shall be 10:00 am local time on 14/11/2024
E. Bid Opening and Evaluation	
ITB 10	The bid opening shall take place at: Gasabo Gold Refinery Ltd (GGR) Kigali Special Economic Zone, Phase II Time: 10:10 am on 14/11/2024
ITB 15.5	Performance Security: shall be issued by successful bidder
F. Award of Contract	
ITB 16.1	The Procuring Entity shall award the contract to the bidder whose bid has been selected as being substantially responsive to the bidding document and who has offered the lowest evaluated bid price, provided that such bidder has been determined to be (a) eligible in accordance with the provisions of ITB Clause 2.
	The Advance Payment shall be limited to 50% of the Contract Price subject to Advance guarantee issued by a recognized bank in Rwanda.

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A. Quality Control

i. Identifying Defects

The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

ii. Tests

If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

iii. Correction of Defects

The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the SCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

Every time notice of a Defect is given; the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

iv. Uncorrected Defects

If the Contractor has not corrected a defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

B. Cost Control

Bill of Quantities

The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.

The Bill of Quantities is used to calculate the Contract Price.

The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

Changes in the Quantities

No adjustment of the rate allowed for any change of the contracted quantities.

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Variations

All Variations shall be included in updated Programs produced by the Contractor.

Payments for Variations

The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.

If the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.

If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.

If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

Cash Flow Forecasts

When the Program1 is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

Payment Certificates

The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.



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The value of work executed shall be determined by the Project Manager.

The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.

The value of work executed shall include the valuation of Variations and Compensation Events.

The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

Payments

Payments shall be adjusted for deductions for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Project Manager within 45 days of the date of each certificate.

Items of the Works for which no rate or price has been entered in shall not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

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Form of Bid Security (Bank Guarantee)

[If required, the **Bank** shall fill in this Bank Guarantee form in accordance with the instructions indicated in brackets.]

[Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: _____ [Name and Address of Procuring Entity]

Date: _____

BID GUARANTEE N°: _____

We have been informed that [name of the Bidder] (hereinafter called "the Bidder") has submitted to you its bid dated (hereinafter called "the Bid") for the execution of [name of tender] under Invitation for Bids No. [IFB number] ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we [name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [amount in figures] ([amount in words]) upon receipt by us of your first demand in writing stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
- (b) having been notified of the acceptance of its Bid by the Procuring Entity during the period of bid validity, (i) fails or refuses to Sign the Contract or (ii) fails or refuses to furnish the performance security, in accordance with the Instructions to Bidders.
- (c) does not accept the arithmetic corrections made to his bill of quantities and price list of his bill

This guarantee will expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful bidder; or (ii) thirty days after the expiration of the Bidder's Bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

Date.....

Name of Authorized Representative personAddress.....

Position.....

Signature..... **Seal**.....



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Performance Bank Guarantee

(Unconditional)

[The **bank** providing the Guarantee shall fill in this form in accordance with the instructions indicated in brackets, if the Procuring Entity requires this type of security.]

[insert bank's name, and address of issuing branch or office]

Beneficiary: [insert name and address of Procuring Entity]

Date: [insert date]

PERFORMANCE GUARANTEE No.: [insert Performance Guarantee number]

We have been informed that [insert name of Contractor] (hereinafter called "the Contractor") has entered into Contract No. [insert reference number of the Contract] dated with you, for the execution of [insert name of Contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Contractor, we [insert name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [insert amount in figures] ([insert amount in words]), such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the . . . Day/month/year..., and any demand for payment under it must be received by us at this office on or before that date. However, before that expiration date, if the planned contract execution period has been delayed or extended, or its value increased, the contractor shall respectively extend the validity period of this performance security or increase its amount accordingly.

Date.....
Name.....Address.....
Position.....

Signature..... **Seal**.....



No: GGR/IMS/PRO/01/FM/06
Rev: 00
Approval Date: 04-OCT-2024

Bank Guarantee for Advance Payment

The **bank/** providing the Guarantee shall fill in this form in accordance with the instructions indicated in brackets, if an Advance Payment is to be provided under the Contract
[insert Bank's name, and address of issuing branch or office]

Beneficiary: *[insert name and address of Procuring Entity]*

Date: *[insert date]*

ADVANCE PAYMENT GUARANTEE No.: *[insert number]*

We have been informed that *[insert name of Contractor]* (hereinafter called "the Contractor") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with you, for the execution of *[insert name of contract and brief description of Works]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment is to be made against an advance payment guarantee in the sum indicated below.

At the request of the Contractor, we *[insert name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount in figures]* (*[insert amount in words]*) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor used the Advance Payment for purposes other than the costs of mobilization in respect of the Works.

It is a condition for any claim and payment under this guarantee to be made that the Advance Payment referred to above must have been received by the Contractor on its account number *[insert account number]* at *[insert name and address of Bank]*.

The maximum amount of this guarantee shall be progressively reduced by the amount of the Advance Payment repaid by the Contractor as indicated in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the date of completion of its total payment. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

Date of issue.....

Name.....Address.....

Position.....

Signature: *[insert signature(s) of authorized representative (s of bank)]*

Seal.....



No: GGR/IMS/PRO/01/FM/06

Rev: 00

Approval Date: 04-OCT-2024

SITE VISIT CERTIFICATE

This form shall be filled during the site visit for the future execution of works.

It certify(name of bidder or his representative)

Visited the site for the purpose of bidding documents.

has already verified the bidding documents, recognize and assured of the nature ,geographical location of the works, general conditions of execution of works, the eventual nearby existing construction which shall have an incidence for the execution of works, the exact works to be executed, the suggestions for maintaining the traffic whereas necessary as well as the water body flow, physical conditions for execution of works, climatic conditions ,local conditions, means of transport, availability of supply of water, electricity ,fuel, the availability of labor in quantity and quality and all other constraints and obligations applied for social laws, tax and all conditions and circumstances which shall have influence for the execution of works and the price.

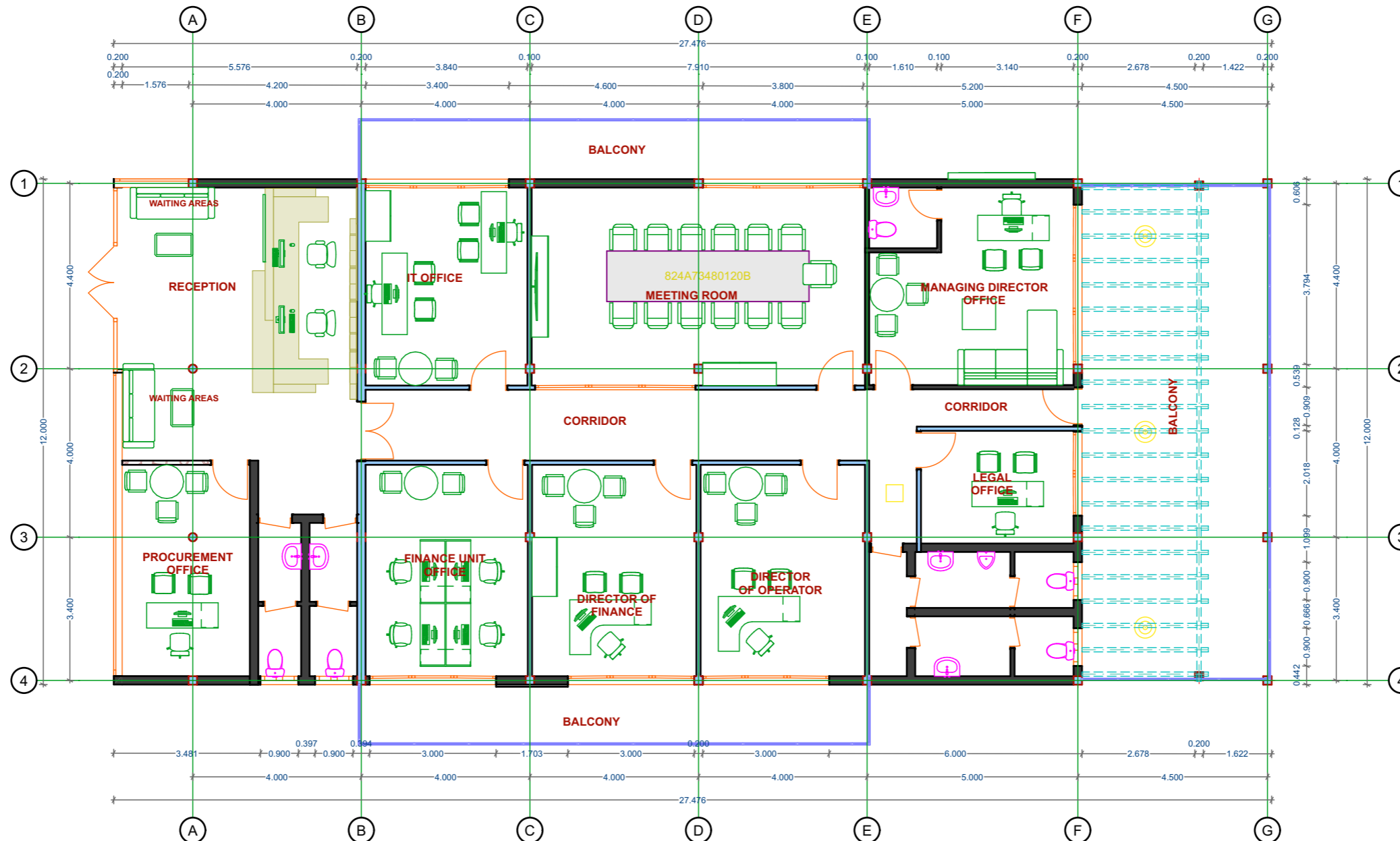
I hereby certify that the description of works and explanation given by the site guide and I understand clearly to the best of my knowledge the works to be executed.

(Name of bidder or his representative)

(Name and function of the person guiding the site visit)

Date:.....

Two handwritten signatures in blue ink are located at the bottom center of the page.



FIRST FLOOR PLAN



Goldstone construction .Ltd
 Avenue du commerce
 Kigali city tower 14th & 15th floor
 tel: +250 788 483 502/ 788 394 552
 PO.BOX: 6428

PROJECT: OFFICE BUILDING CONSTRUCTION
 CLIENT: GASABO GOLD REFINERY. LTD
 ADDRESS
 Gasabo DISTRICT
 kigali city
RWANDA

Modified by
Eng. HARERIMANA Yannick

24-09-2024

Checked by

24-09-2024

Drawing Name
FIRST FLOOR PLAN

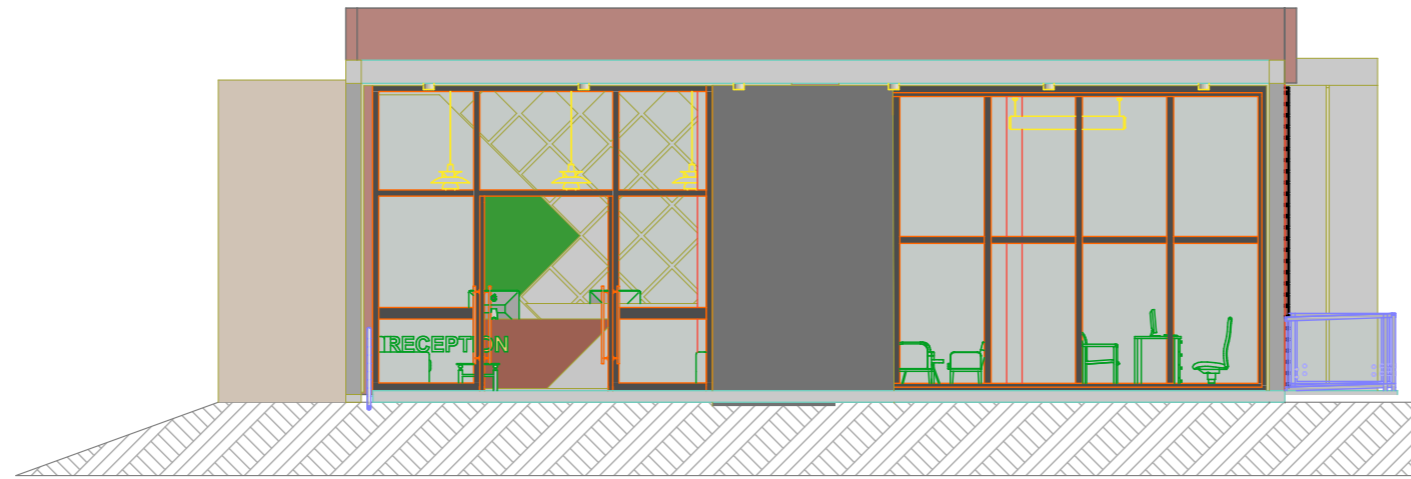
FLOOR PLAN

Drawing Scale

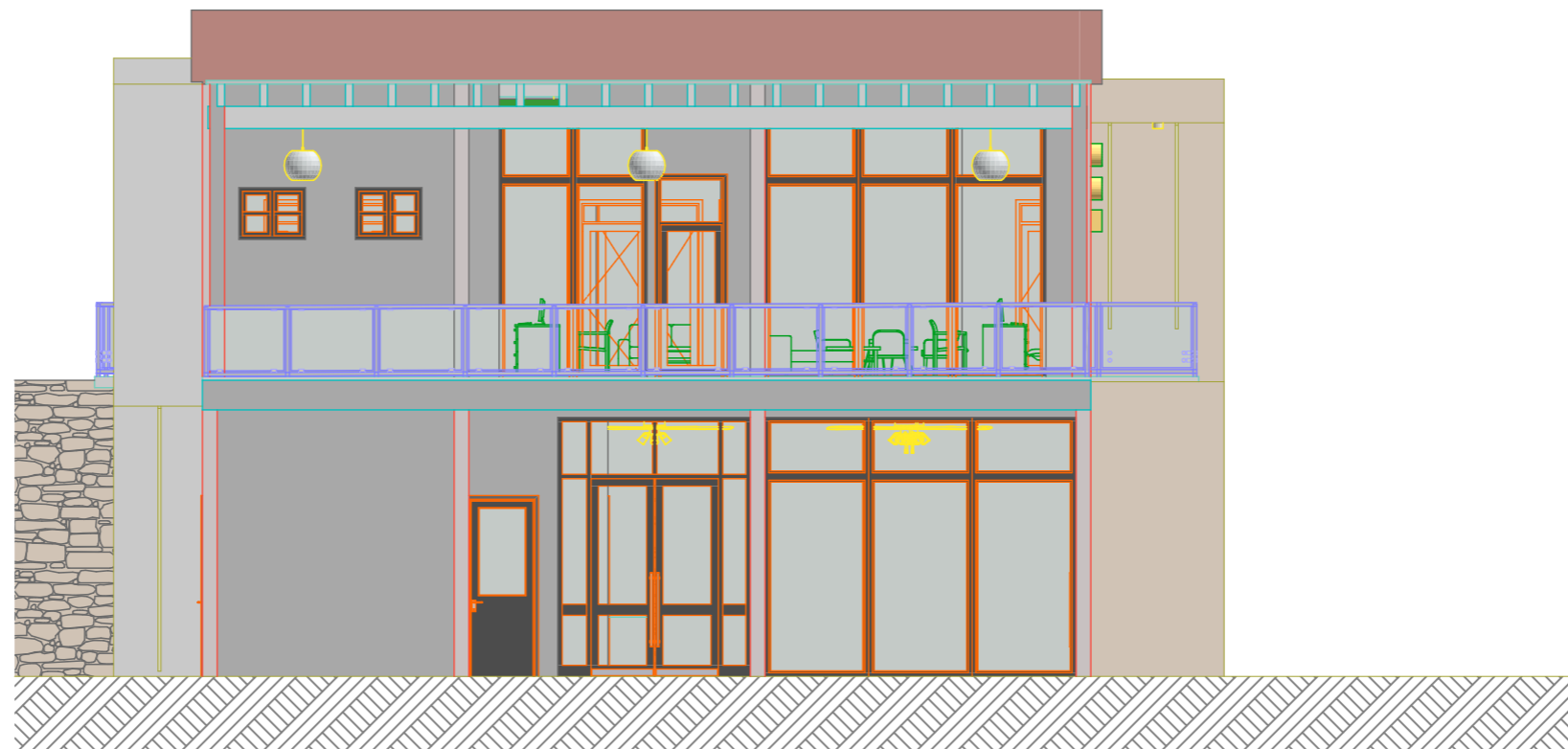
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Layout ID
#LayID

Revision
#ReVID



FRONT ELEVATION PLAN



BACK ELEVATION PLAN



Goldstone Construction Ltd

Goldstone construction .Ltd
 Avenue du commerce
 Kigali city tower 14th & 15th floor
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Drawing Name
FRONT ELEVATION PLAN

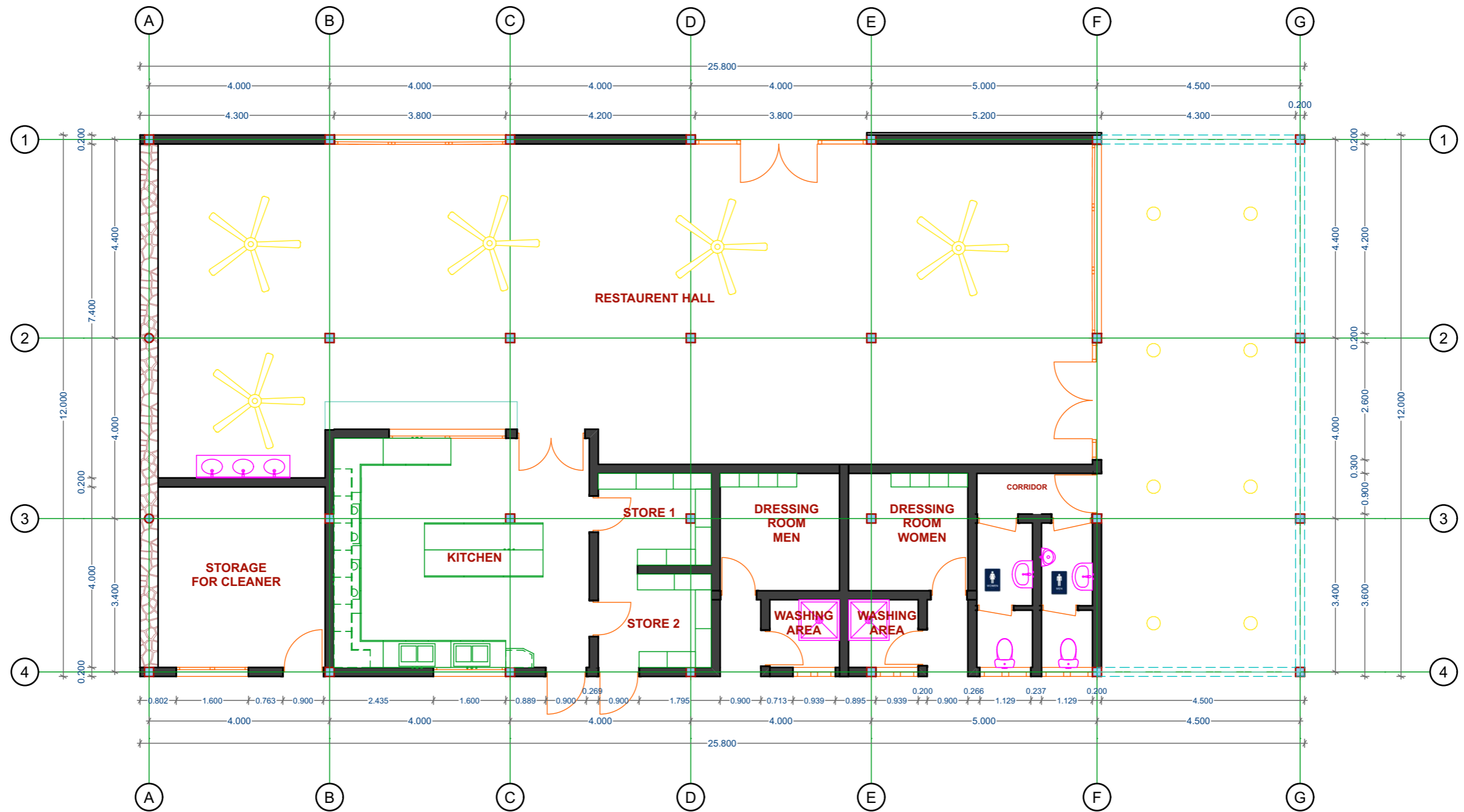
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Drawing Scale

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Layout ID
#LayID

Revision
#ReVID



GROUND FLOOR PLAN



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GROUND FLOOR PLAN

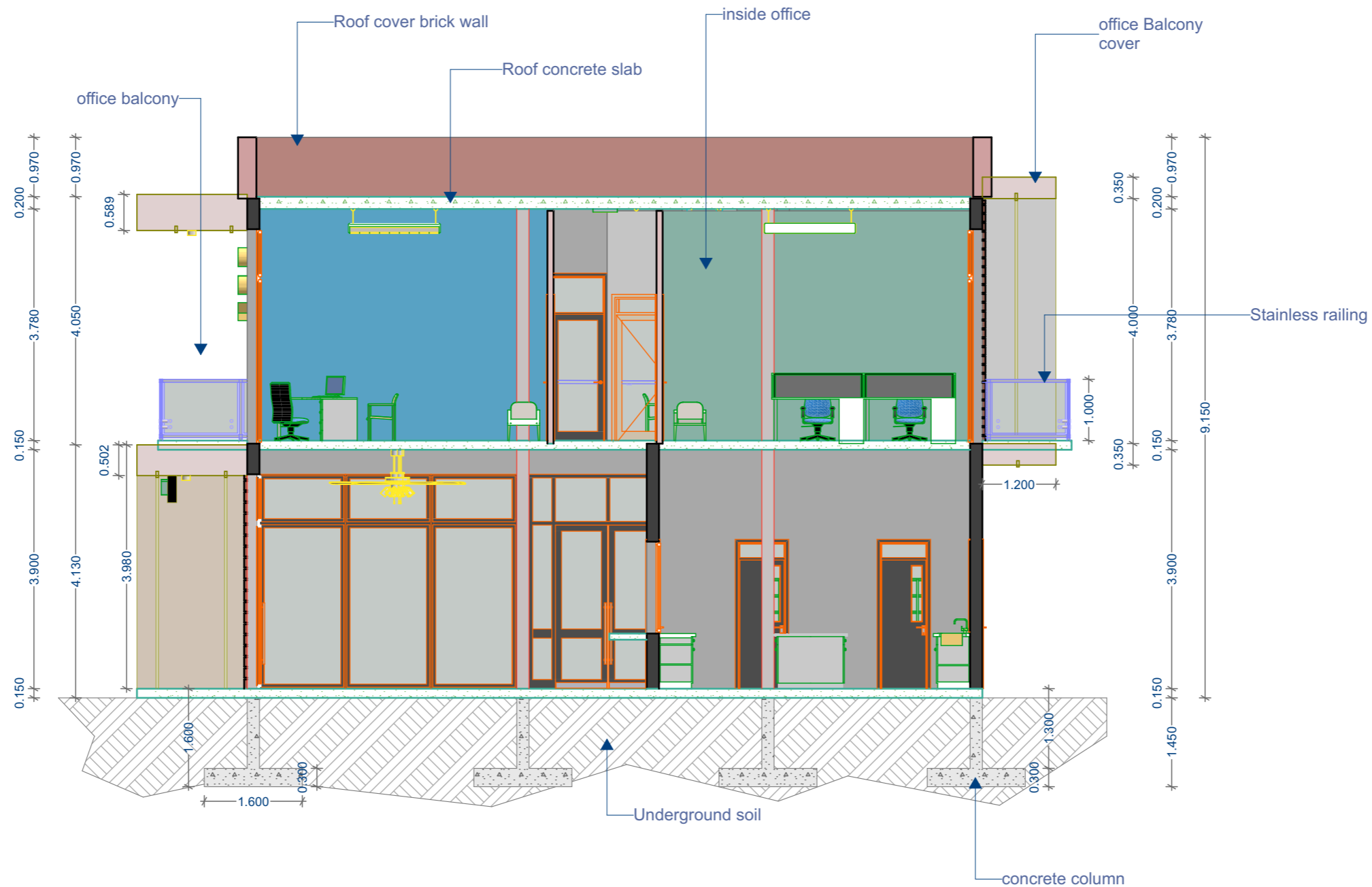
FLOOR PLAN

Drawing Scale

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Layout ID
#LayID

Revision
#ReVID



SECTION LAYOUT PLAN



Goldstone construction .ltd
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Eng. HARERIMANA Yannick 24-09-2024
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Drawing Name
SECTION LAYOUT PLAN
 ELEVATION PLAN

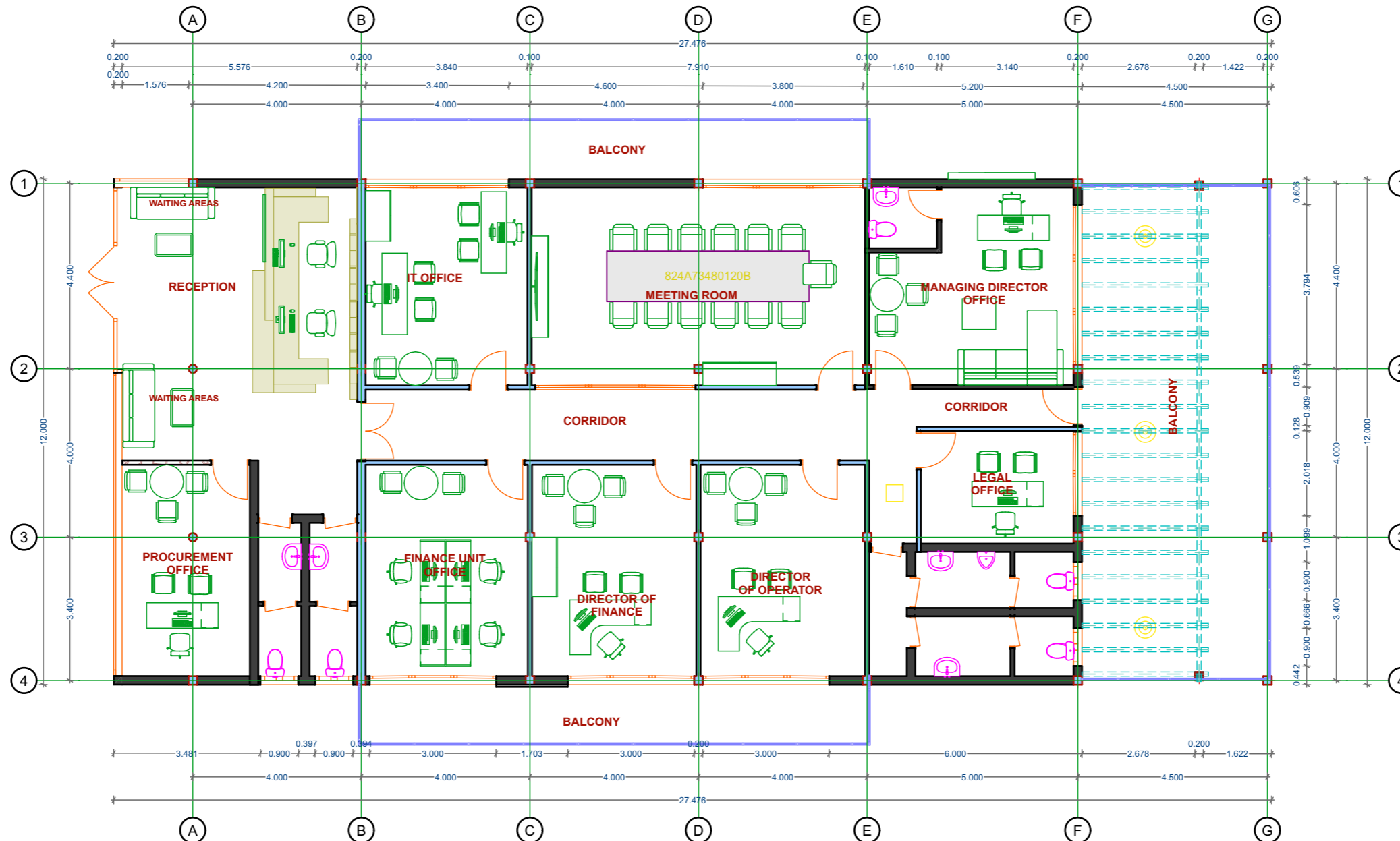
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#LayID Revision
#ReVID



LEFT SIDE ELEVATION PLAN



RIGHT SIDE ELEVATION PLAN



FIRST FLOOR PLAN



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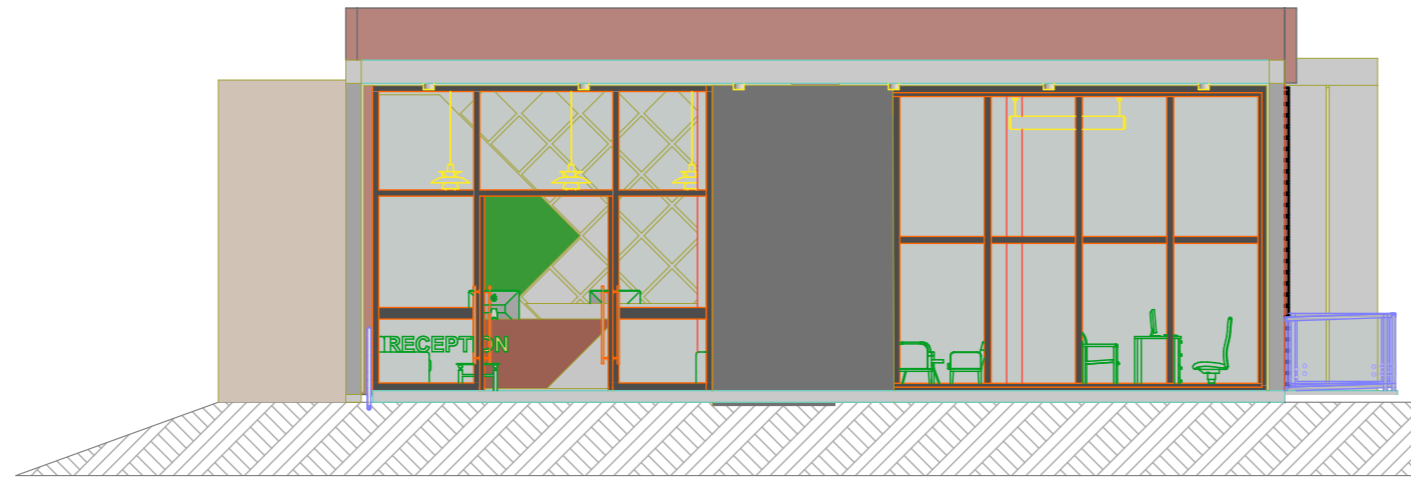
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Drawing Scale

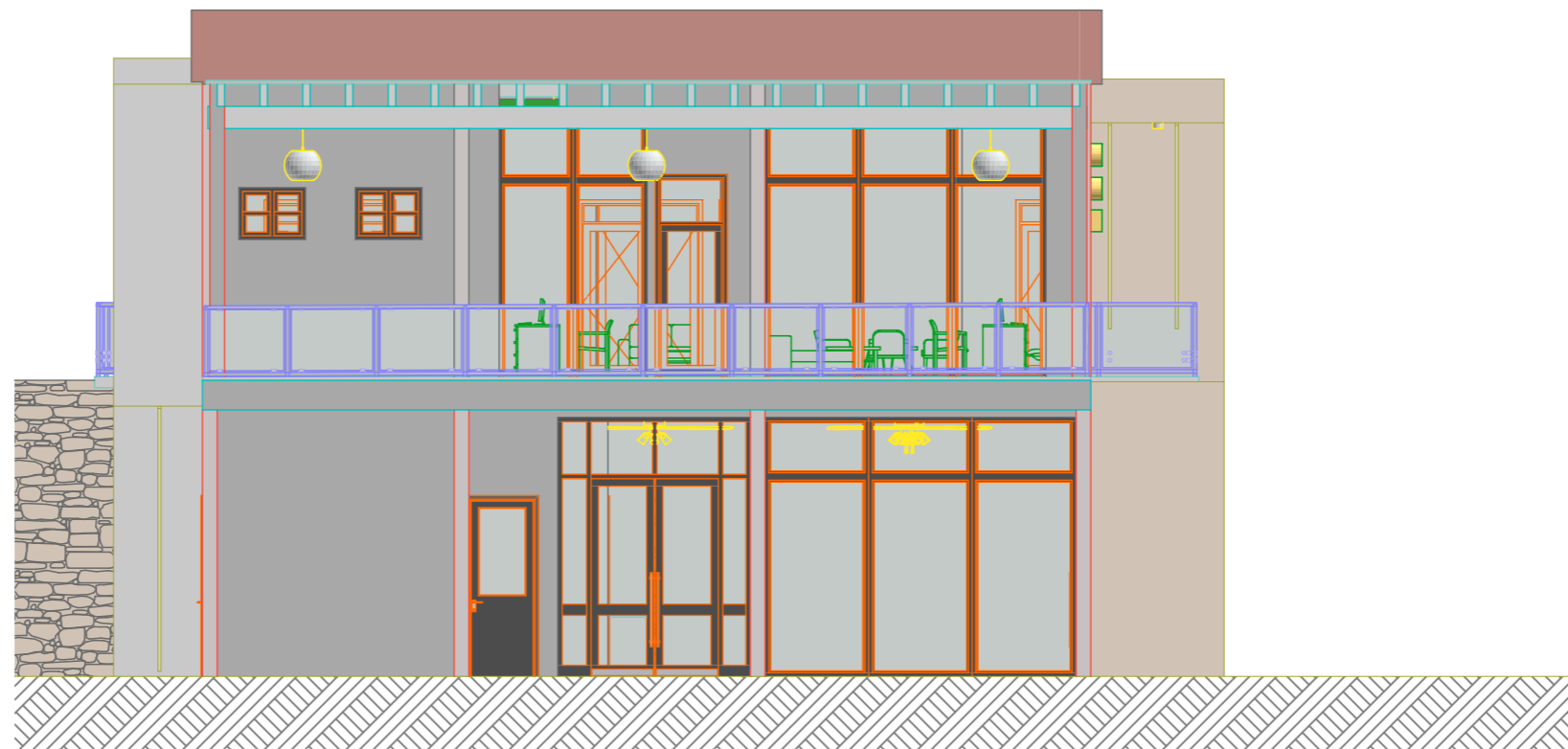
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Layout ID
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FRONT ELEVATION PLAN



BACK ELEVATION PLAN



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24-09-2024

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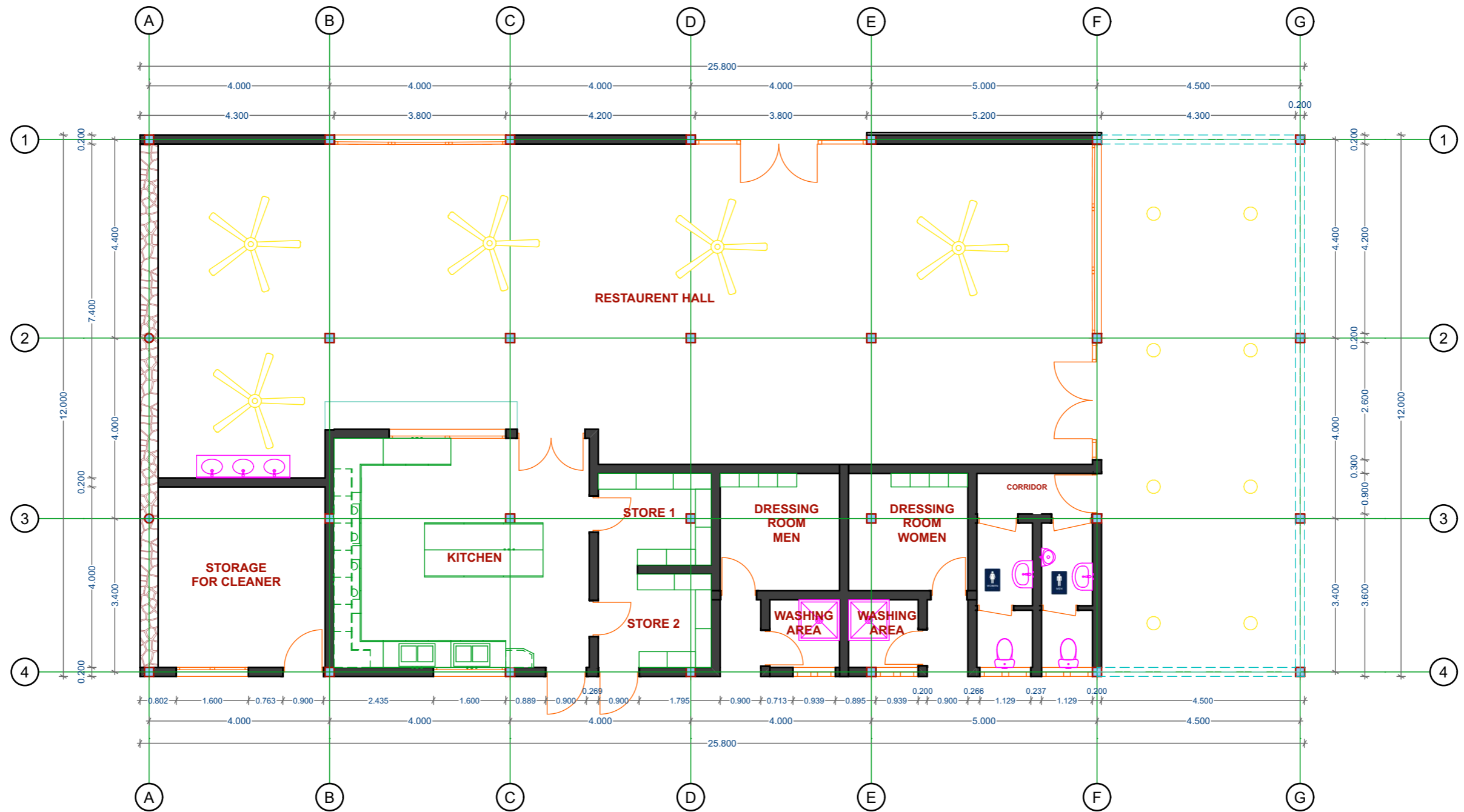
ELEVATION PLAN

Drawing Scale

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Layout ID
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Revision
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GROUND FLOOR PLAN



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GROUND FLOOR PLAN

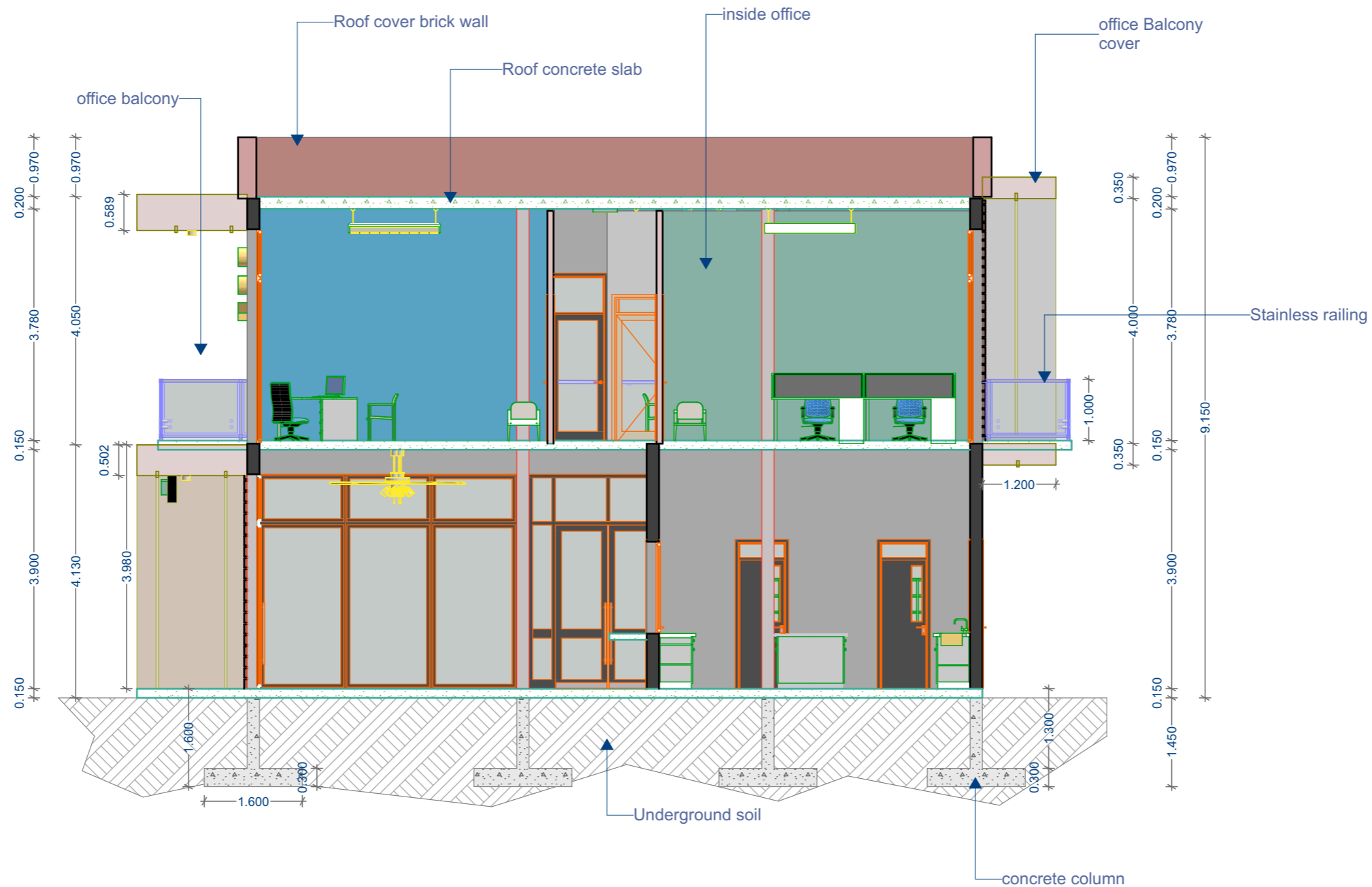
FLOOR PLAN

Drawing Scale

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SECTION LAYOUT PLAN



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Drawing Name
SECTION LAYOUT PLAN
 ELEVATION PLAN

Drawing Scale
1:83.97
 Layout ID
#LayID Revision
#ReVID



LEFT SIDE ELEVATION PLAN



RIGHT SIDE ELEVATION PLAN



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Modified by
 Eng. HARERIMANA Yannick

24-09-2024

Checked by

24-09-2024

Drawing Name
SIDES ELEVATION PLAN

ELEVATION PLAN

Drawing Scale

1:123.37

Layout ID
#LayID

Revision
#ReVID



GASABO
GOLD
REFINERY

STAFF RESTROOM



GASABO
GOLD
REFINERY

STAFF RESTORANT











