

# ENGINEERING DESIGN

Project Name: TPS - 703 Don Mills

Location: 703 Don Mills Rd, North York, ON M3C 3N3

Customer: TPS

Frequency Band/Technology: 700/800 MHz Public Safety

Revision: Issued for Tender



 WIRELESS SOLUTIONS INC.	Title	Cover 703 Don Mills	Designer name	RF Engineering
	Company	Linkwave Wireless Solutions	Date	12/08/2024

# REVISION CONTROL

Revision	Date	Description	Prepared by
1.0	04-25-2024	-Preliminary Design	Rowell Dahiroc
1.1	06-05-2024	- Relocate BDA, CAN and CAP-M loacation from PH to F9 - Added APC-UPS with Monitoring	Rowell Dahiroc
1.2	08-12-2024	- Issued for Tender	Rowell Dahiroc

# CONTACT INFORMATION

## Customer Contact

Project Name	TPS - 703 Don Mills		
Project Address	703 Don Mills Rd, North York, ON M3C 3N3		
Company	Contact Name	Contact Number	E-mail Address
Motorola Solutions			

## LinkWave Contact

Name	Title	Contact Number	Email Address
John Willson	Technical Services Manager	647-403-7369	john.wilson@linkwavewireless.com
Harold Tian	Senior Project Manager	647-388-5158	harold.tian@linkwavewireless.com

## Project Location Contact

Name	Title	Contact Number	Email Address
David Barnes		416-553-0490	david.barnes@torontopolice.on.ca

# FACILITY INFORMATION

		Plan area (Sq. ft)	Pred area (Sq. ft)
Building 1	Basement	14743.51	14743.51
	F1	13468.10	12912.80
	F2	13250.39	12315.66
	F3	13473.26	13135.20
	F4	13446.57	13112.03
	F5	13494.90	13131.56
	F6	13357.18	13102.49
	F7	13543.06	13198.98
	F8	13492.17	13145.33
	F9	13588.46	13051.49
	PH	12643.11	12643.11
	Roof	0.00	0.00
	<b>Total Floors</b>	<b>148500.70</b>	<b>144492.17</b>
Overall Project	<b>148500.70</b>	<b>144492.17</b>	

**Facility Overview**

Square Footage (highlighted portion only) : 148,500.70 sq.ft  
 Building Structure: Office  
 No. of Floors: 11  
 No. of Floors covered by DAS: 11

# SYSTEM INFORMATION

RF Source	
Signal Source	Off-Air
Location of Head End	Floor 9 Server Room
Frequency Bands/Technology/	700 MHz & 800 MHz (Public Safety)
No. of Channels	700 MHz - 13 channels 800 MHz - 21 Channels

## Coverage Objective

700 MHz Public Safety band, - 95 dBm RSSI for 95% of the area  
800 MHz Public Safety band, - 95 dBm RSSI for 95% of the area

## Solution summary:

### Target Coverage Areas:

B1, F1, F2, F3, F4, F5, F6, F7, F8, F9, PH

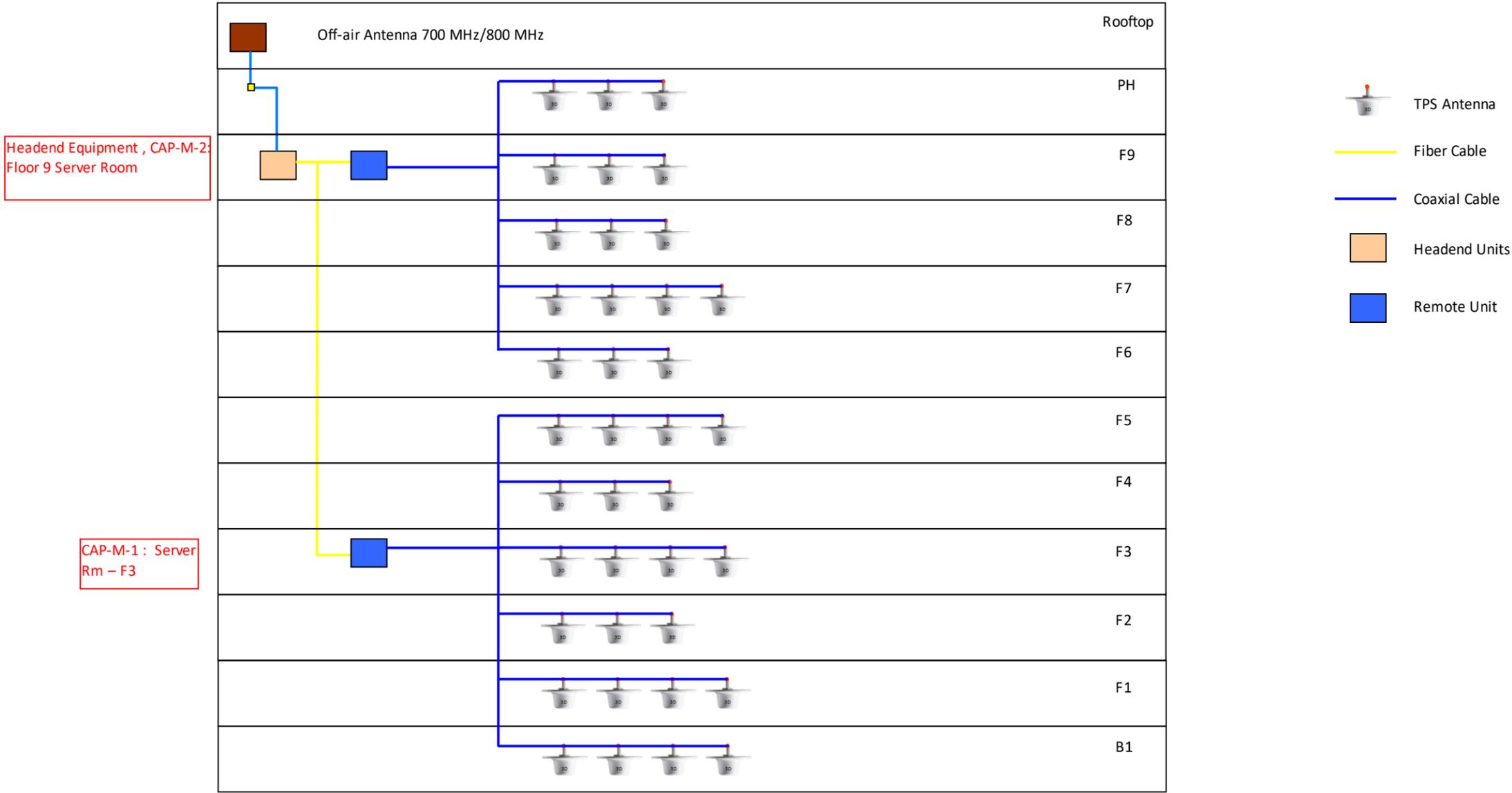
	Title	System Information 703 Don Mills	Designer name	RF Engineering
	Company	Linkwave Wireless Solutions	Date	12/08/2024

# LOCATION TOP VIEW



	Title	Location Top View 703 Don Mills	Designer name	RF Engineering
	Company	Linkwave Wireless Solutions	Date	12/08/2024

# CABLE LAYOUT



	Title	Cable Layout 703 Don Mills	Designer name	RF Engineering
	Company	Linkwave Wireless Solutions	Date	12/08/2024

Rooftop



Toronto police  
700 MHz  
P25  
Sector 1  
Nb. of ch.:13



Toronto police  
800 MHz - SMR  
P25  
Sector 1  
Nb. of ch.:21



AR-1

12.42 m  
CR P-60

Polyphaser to be mounted inside  
of PH next to cable entry

Penthouse



MSC3

Ground Bar bonded to  
building ground in PH



AP-1



AP-2



AP-3

8.76 m  
CP-1

20.30 m  
CP-3

8.86 m  
CP-4

SP-1  
DN-44FE

20.88 m  
CP-2

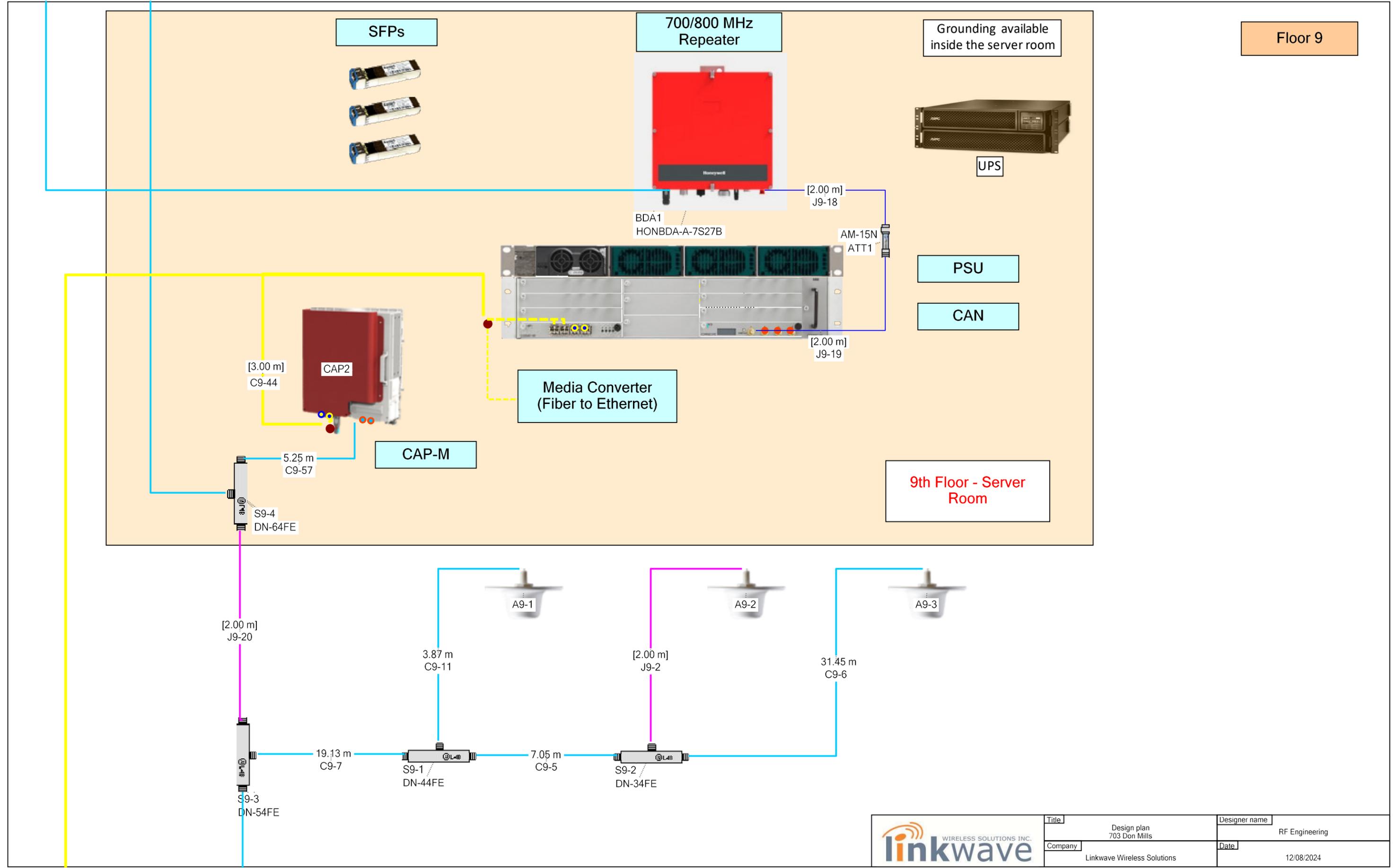
SP-2  
D2-16FE

20.62 m  
CP 9-61

20.27 m  
C9 P-58



Title	Design plan 703 Don Mills	Designer name	RF Engineering
Company	Linkwave Wireless Solutions	Date	12/08/2024

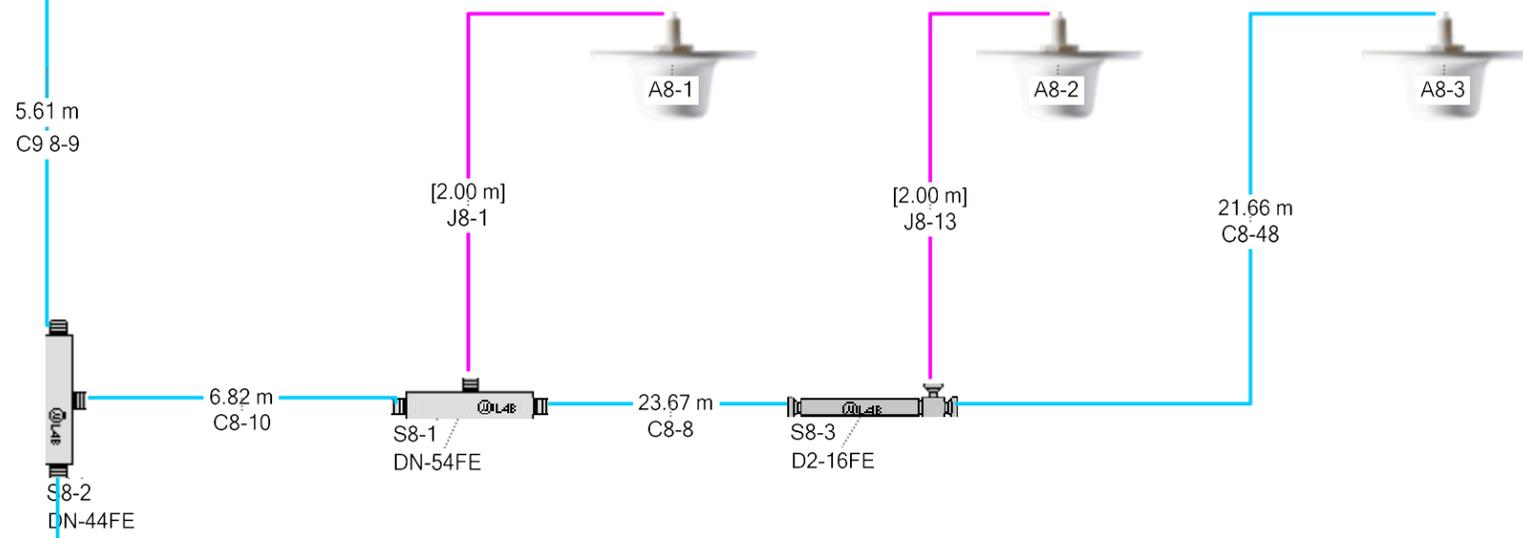


Floor 9

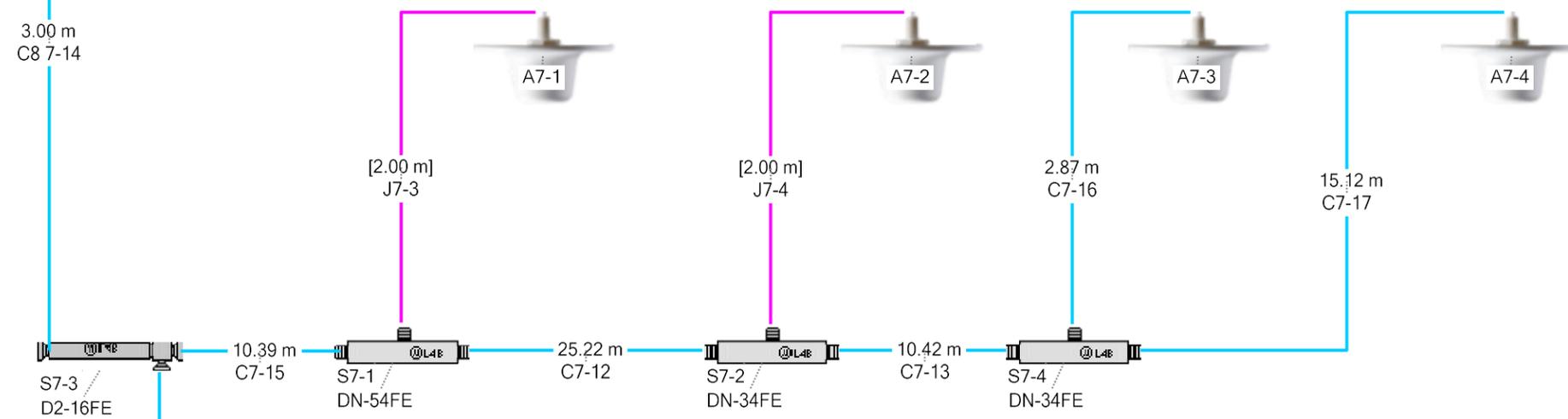
9th Floor - Server Room

	Title	Design plan 703 Don Mills	Designer name	RF Engineering
	Company	Linkwave Wireless Solutions		Date

Floor 8



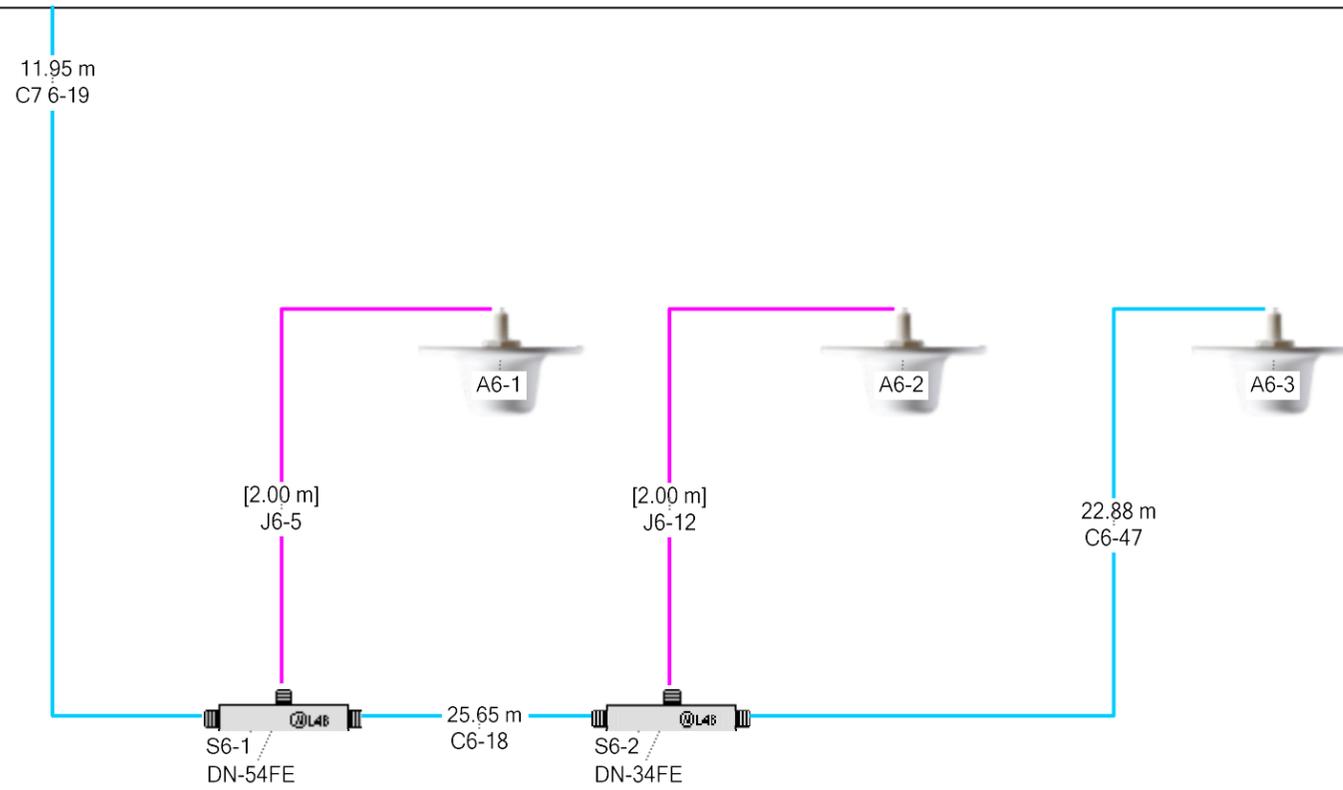
Floor 7



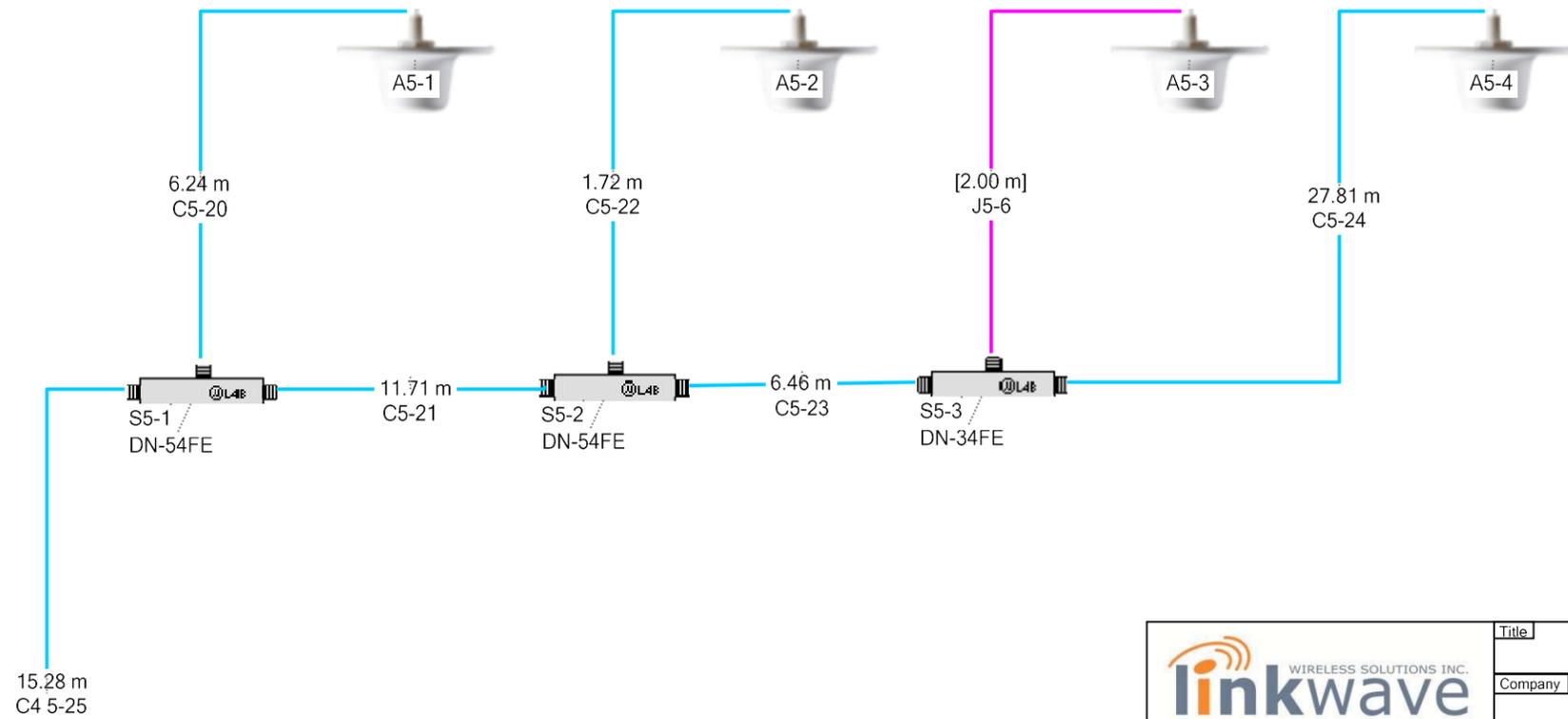
31.47 m  
C9 3-59

	Title	Design plan 703 Don Mills	Designer name	RF Engineering
	Company	Linkwave Wireless Solutions	Date	12/08/2024

Floor 6



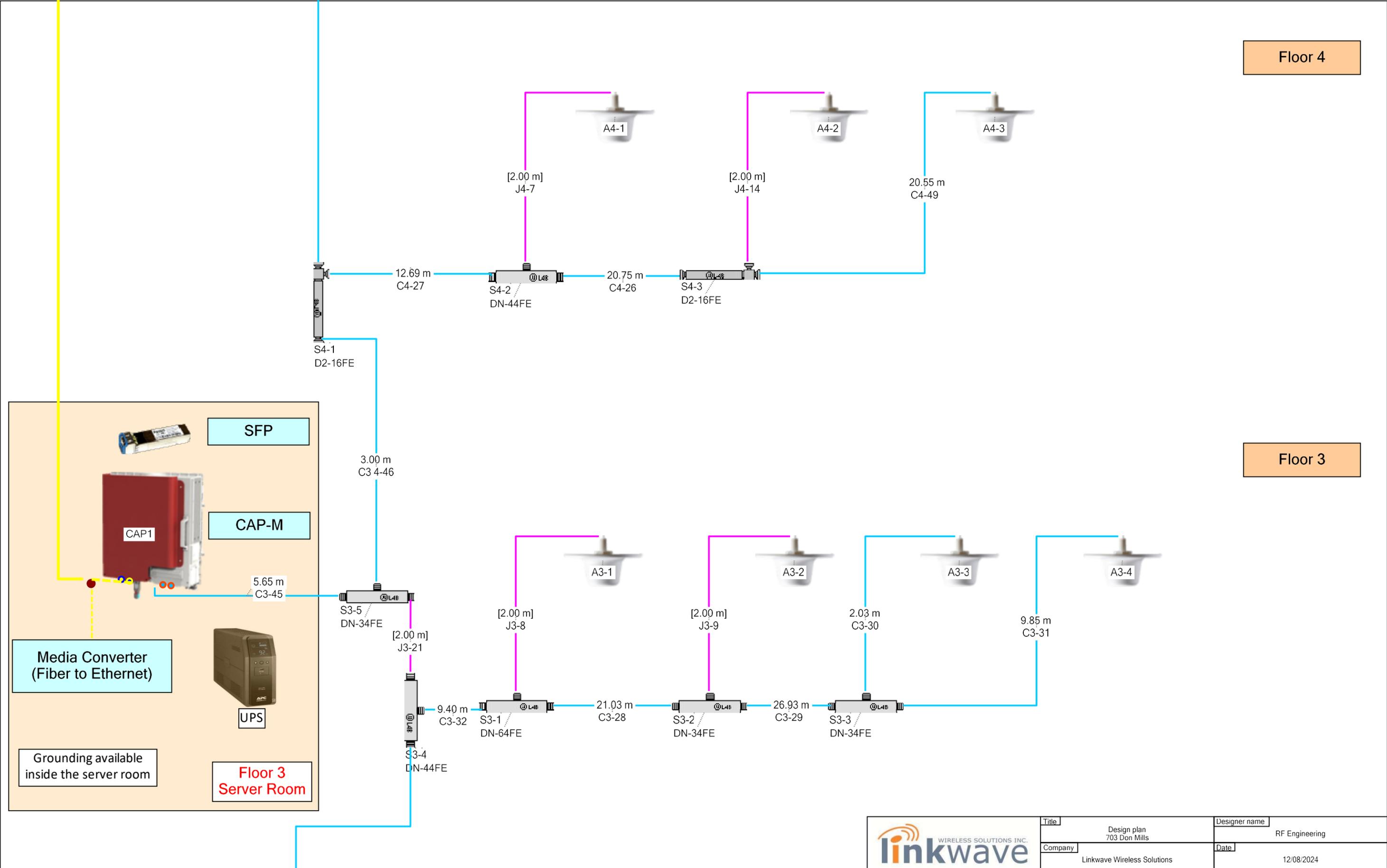
Floor 5



Title	Design plan 703 Don Mills	Designer name	RF Engineering
Company	Linkwave Wireless Solutions	Date	12/08/2024

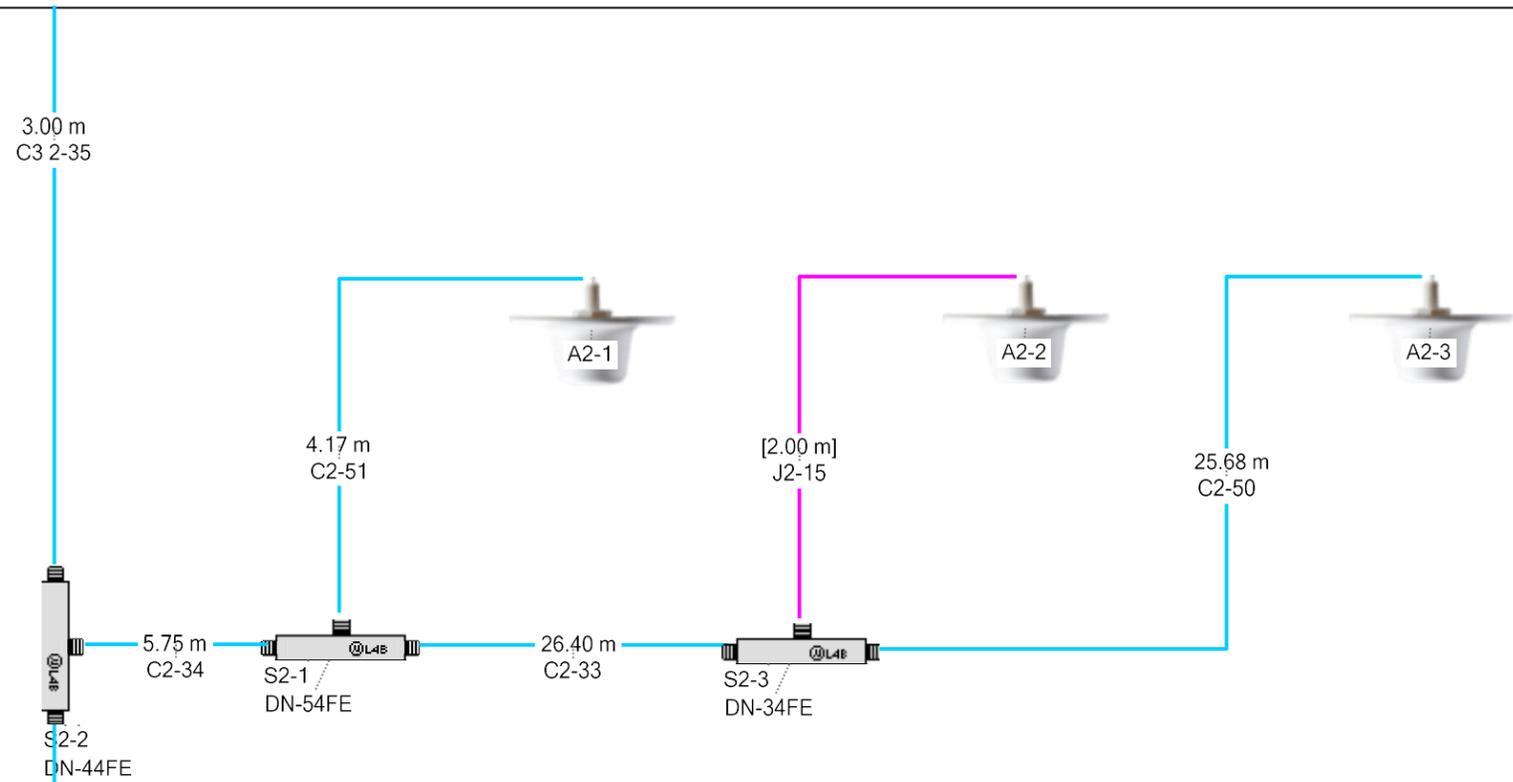
Floor 4

Floor 3

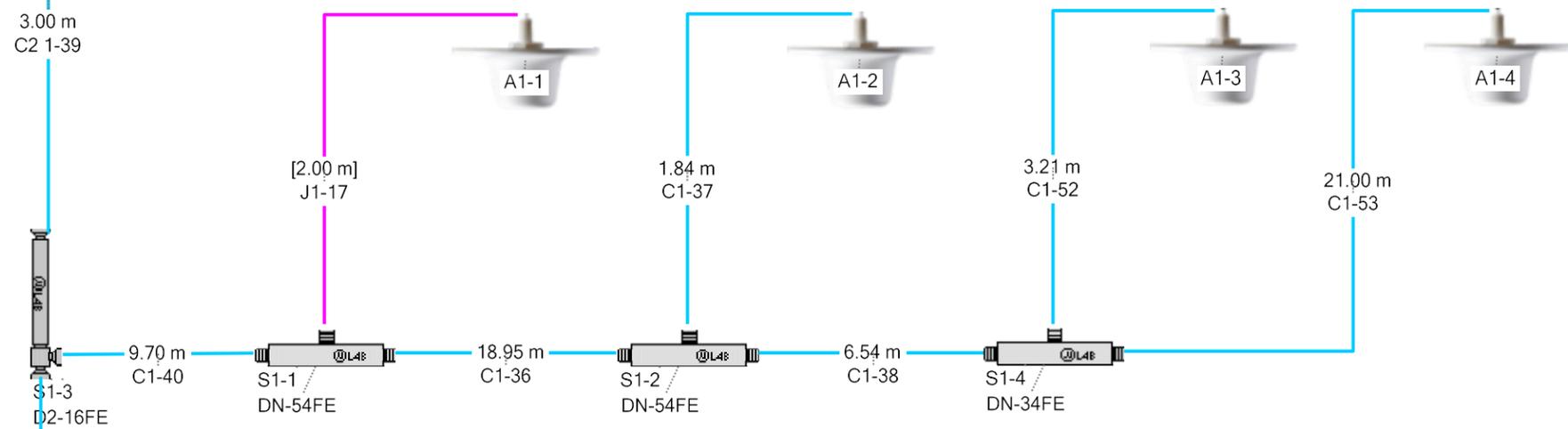


Title	Design plan 703 Don Mills	Designer name	RF Engineering
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Floor 2

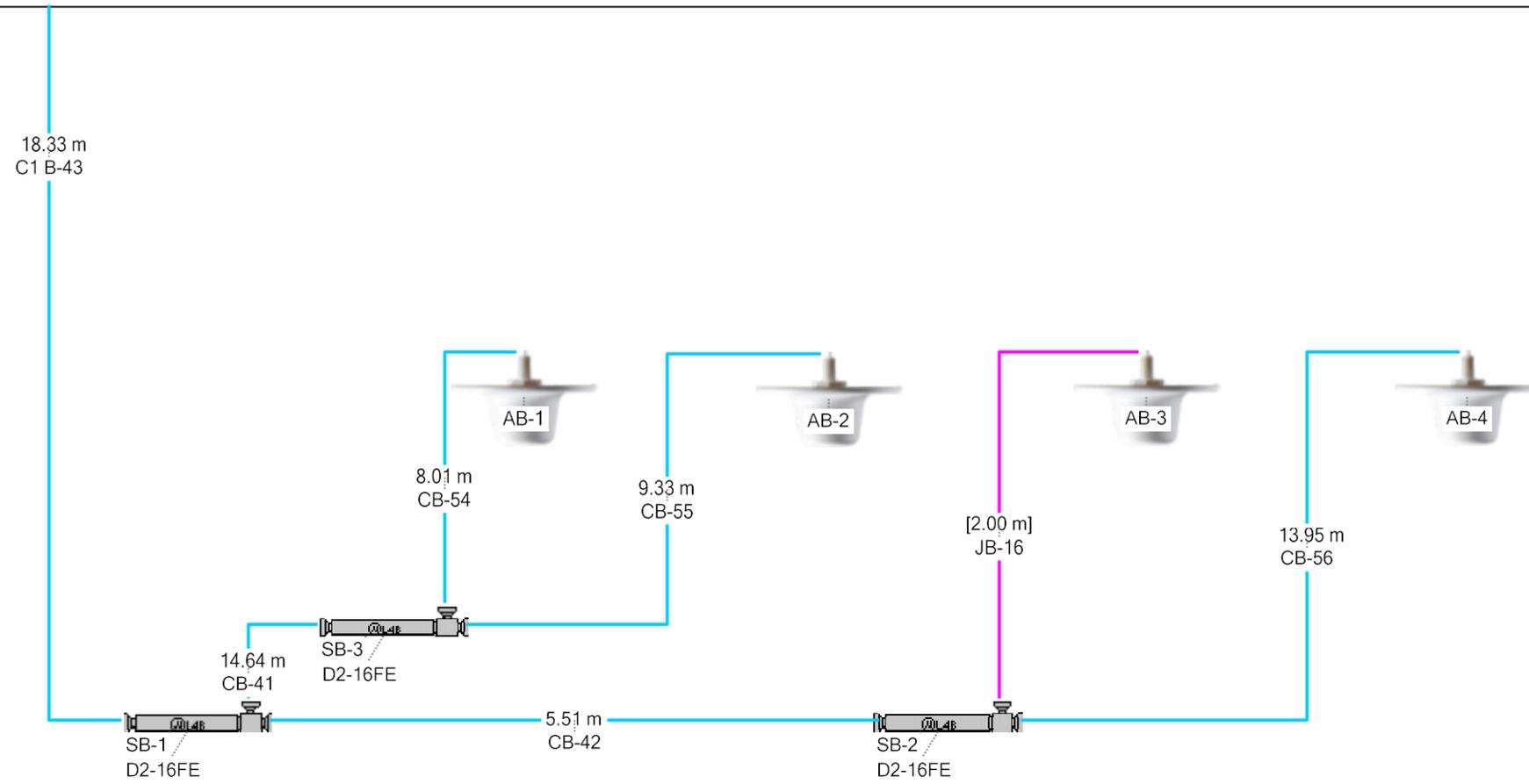


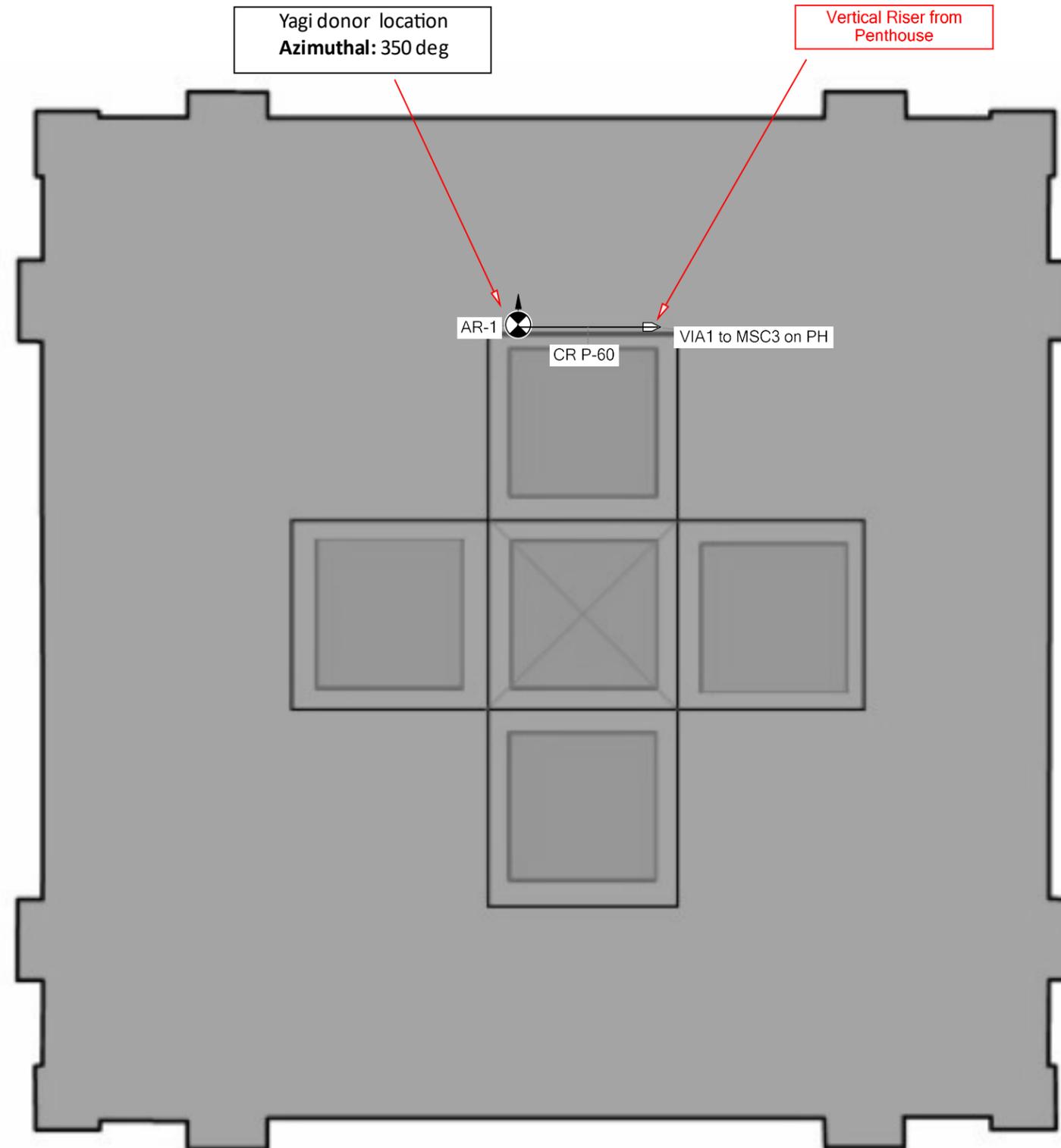
Floor 1



 WIRELESS SOLUTIONS INC.	Title	Design plan 703 Don Mills	Designer name	RF Engineering
	Company	Linkwave Wireless Solutions	Date	12/08/2024

Basement





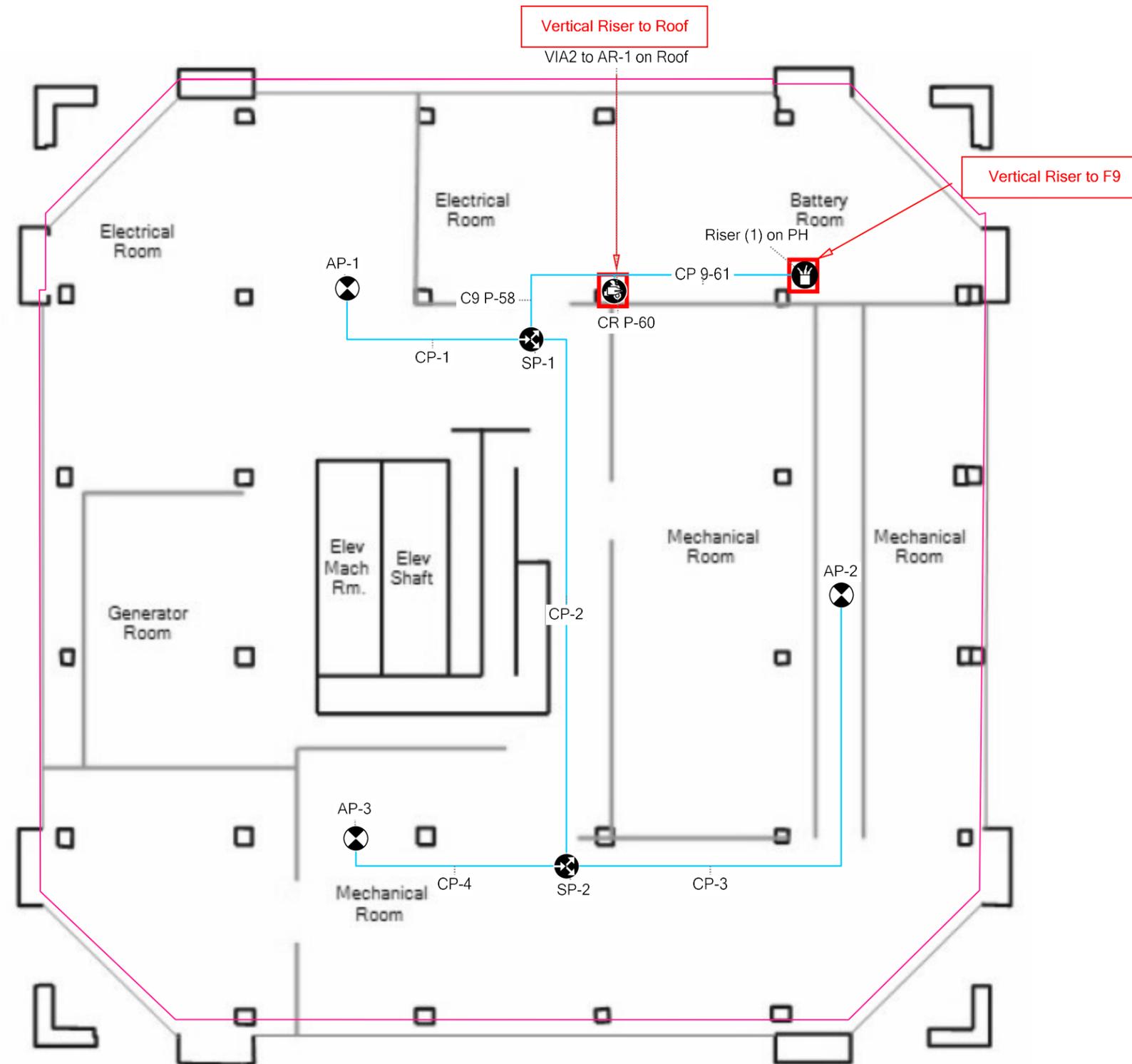
Revision history		
Rev	Date	Author
1.0	25/04/2024	RF Engineering
Preliminary Design		
1.1	05/06/2024	RF Engineering
Relocate BDA, CAN & CAP-M location from PH to...		
1.2	12/08/2024	RF Engineering
Issued for tender		

Project name  
703 Don Mills

Designer name  
RF Engineering

Roof

12/08/2024



Linkwave Wireless Solutions

Revision history	Rev	Date	Author
Preliminary Design	1.0	25/04/2024	RF Engineering
Relocate BDA, CAN & CAP-M location from PH to...	1.1	05/06/2024	RF Engineering
Issued for tender	1.2	12/08/2024	RF Engineering

Project name  
703 Don Mills

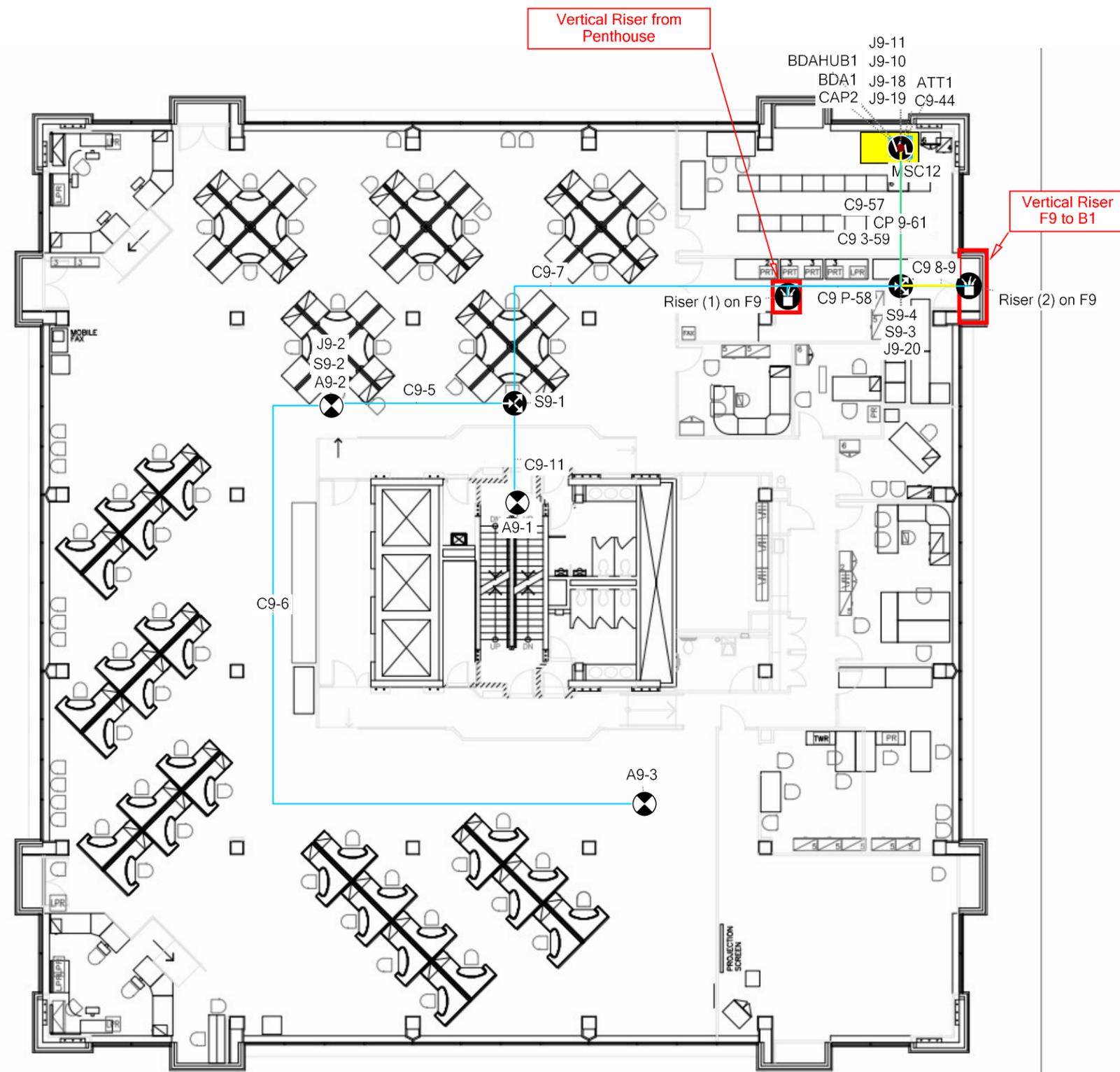
Address

Designer name  
RF Engineering

PH

12/08/2024

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Revision history	Rev	Date	Author
1.0	25/04/2024	RF Engineering	Preliminary Design
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Project name  
703 Don Mills

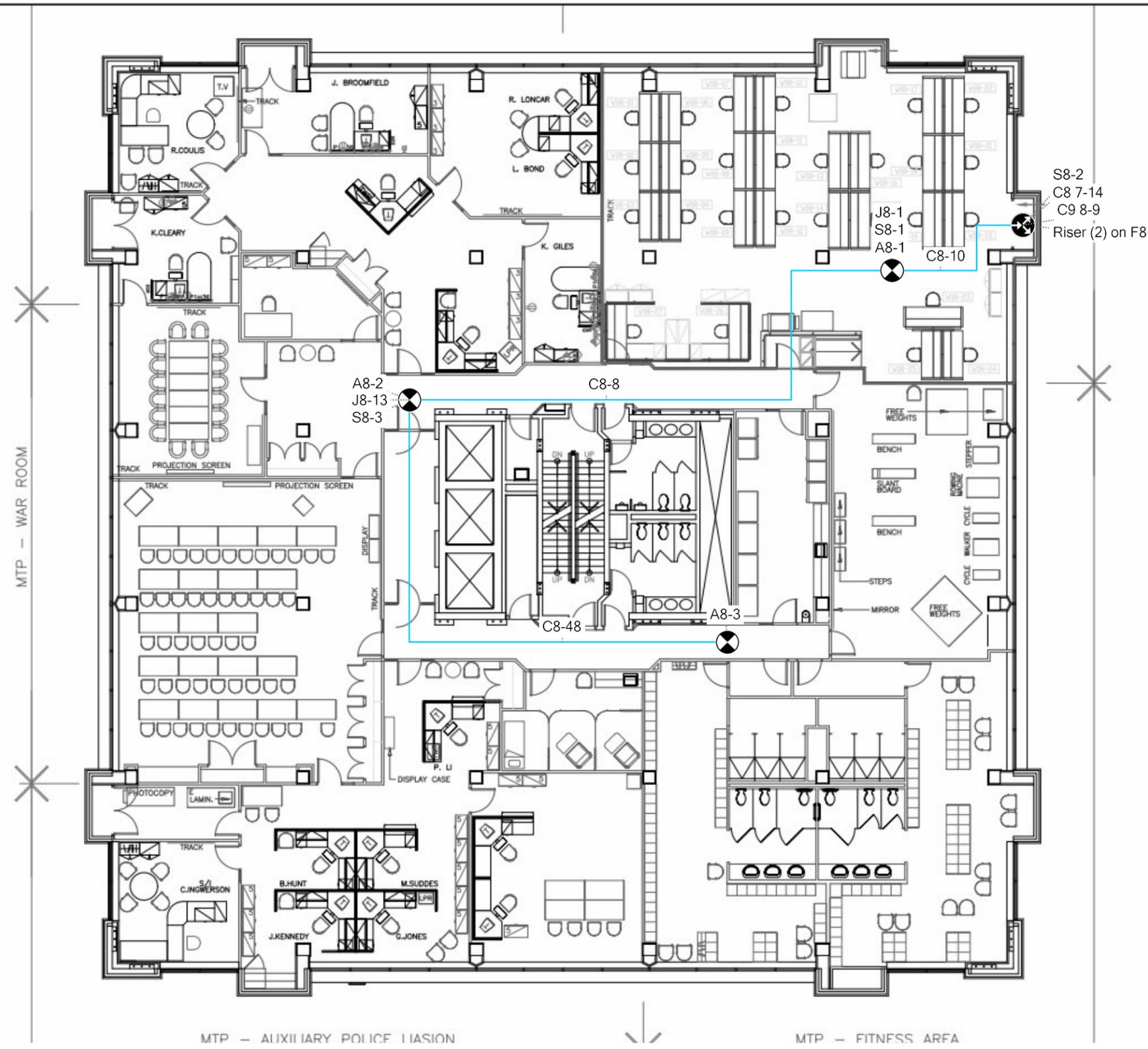
Designer name  
RF Engineering

F9

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S8-2  
C8 7-14  
C9 8-9  
Riser (2) on F8

A8-2  
J8-13  
S8-3

C8-8

J8-1  
S8-1  
A8-1

C8-10

C8-48

A8-3

MTP - WAR ROOM

MTP - AUXILIARY POLICE LIASION

MTP - FITNESS AREA

Revision history	Rev	Date	Author
1.0	25/04/2024	RF Engineering	Preliminary Design
1.1	05/06/2024	RF Engineering	Relocate BDA, CAN & CAP-M location from PH to...
1.2	12/08/2024	RF Engineering	Issued for tender

Project name  
**703 Don Mills**

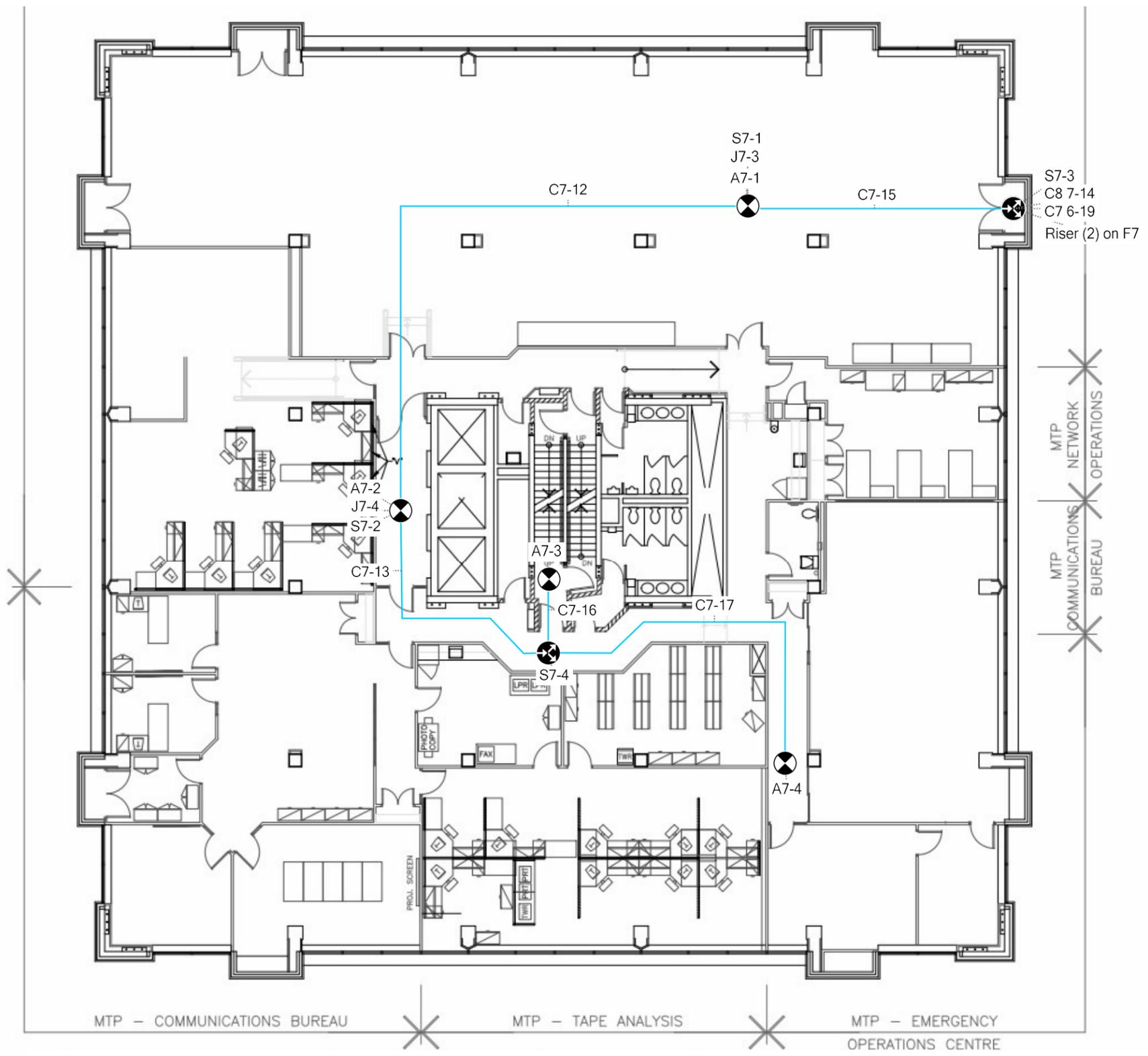
Designer name  
RF Engineering

F8

12/08/2024

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Linkwave Wireless Solutions

Revision history	Rev	Date	Author
1.0	25/04/2024	RF Engineering	Preliminary Design
1.1	05/06/2024	RF Engineering	Relocate BDA, CAN & CAP-M location from PH to...
1.2	12/08/2024	RF Engineering	Issued for tender

Project name  
703 Don Mills

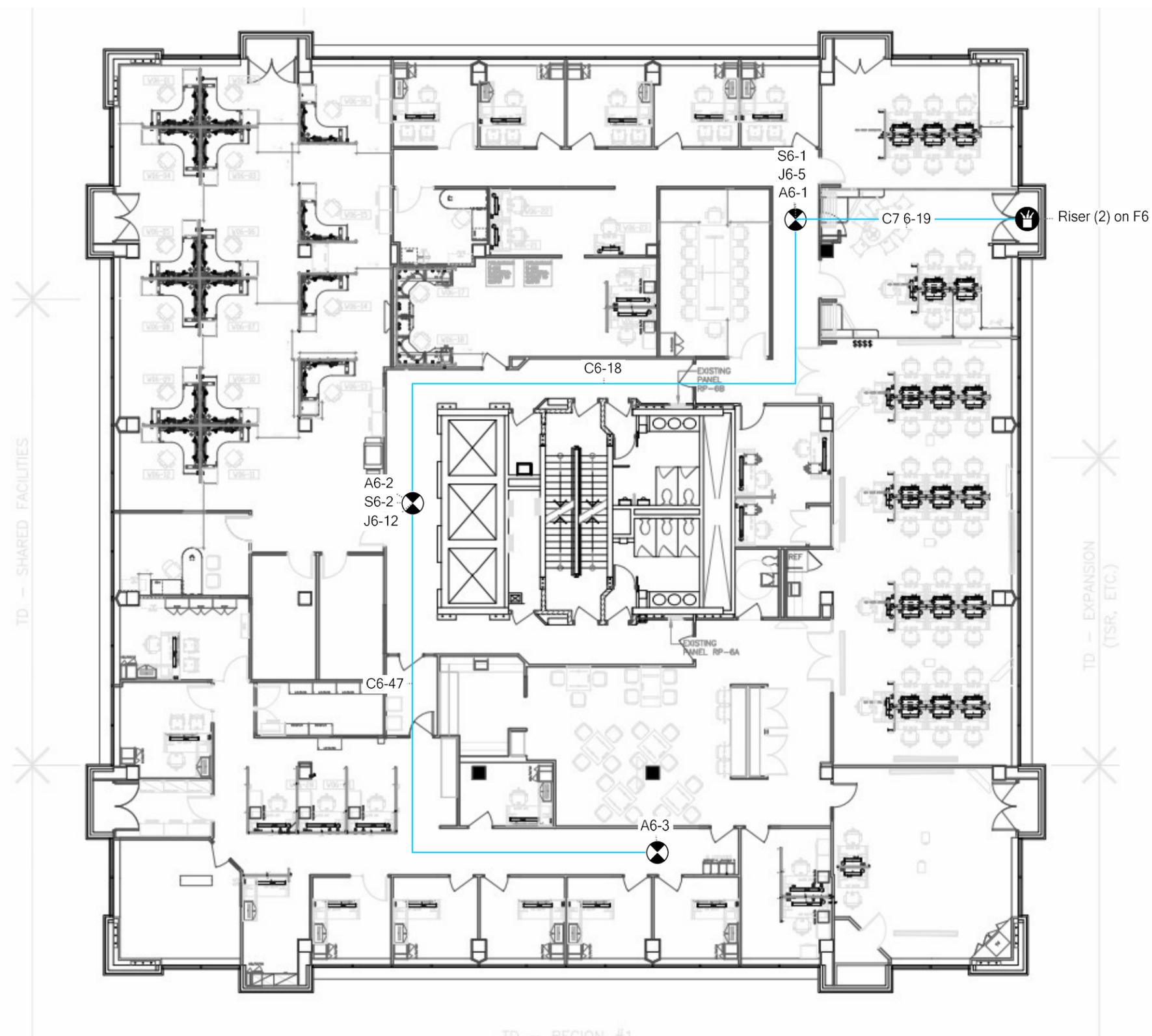
Designer name  
RF Engineering

F7

12/08/2024

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Revision history	Rev	Date	Author
1.0	25/04/2024	RF Engineering	Preliminary Design
1.1	05/06/2024	RF Engineering	Relocate BDA, CAN & CAP-M location from PH to...
1.2	12/08/2024	RF Engineering	Issued for tender

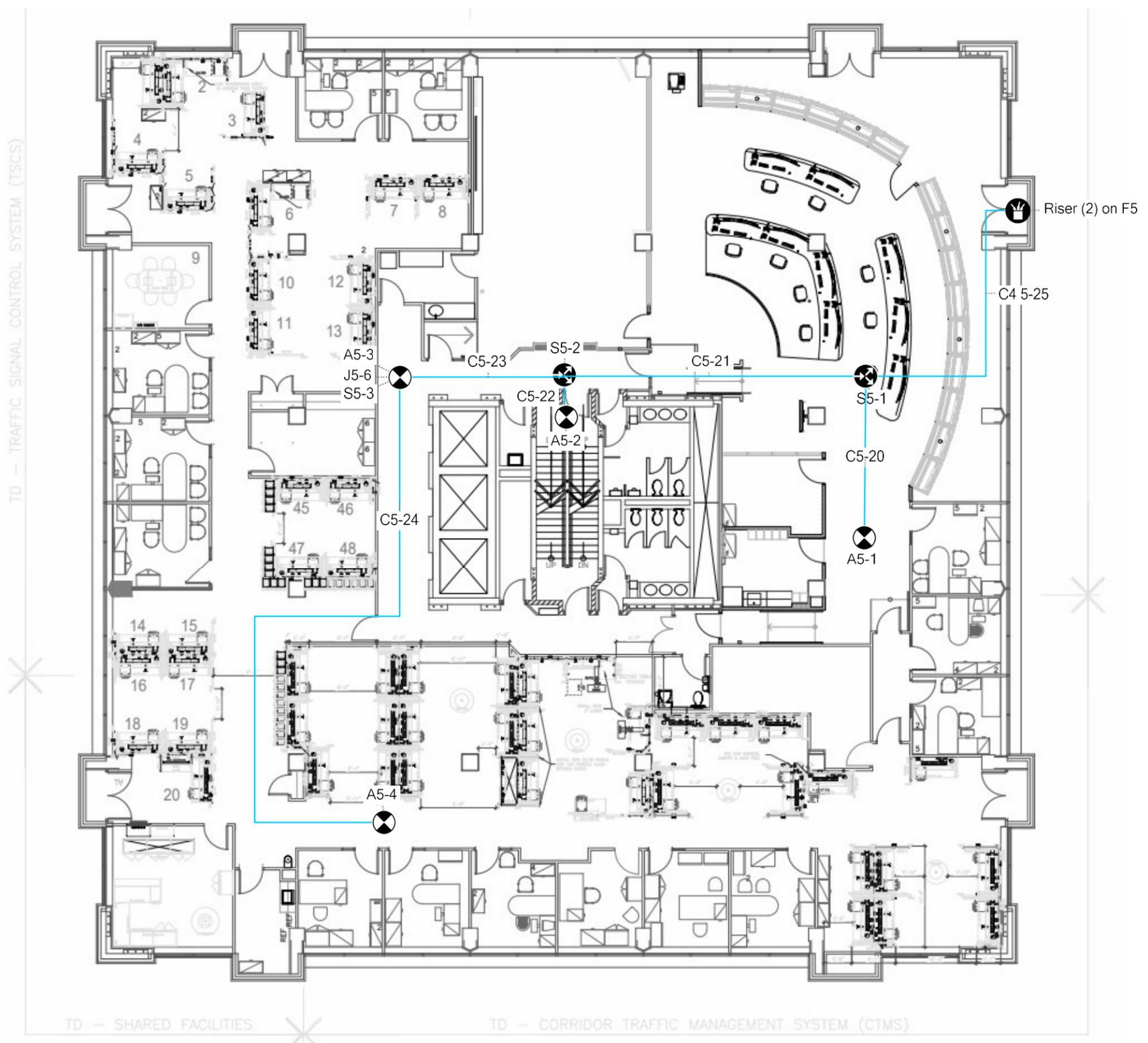
Project name  
703 Don Mills

Designer name  
RF Engineering

F6

12/08/2024





Revision history		
Rev	Date	Author
1.0	25/04/2024	RF Engineering
Preliminary Design		
1.1	05/06/2024	RF Engineering
Relocate BDA, CAN & CAP-M location from PH to...		
1.2	12/08/2024	RF Engineering
Issued for tender		

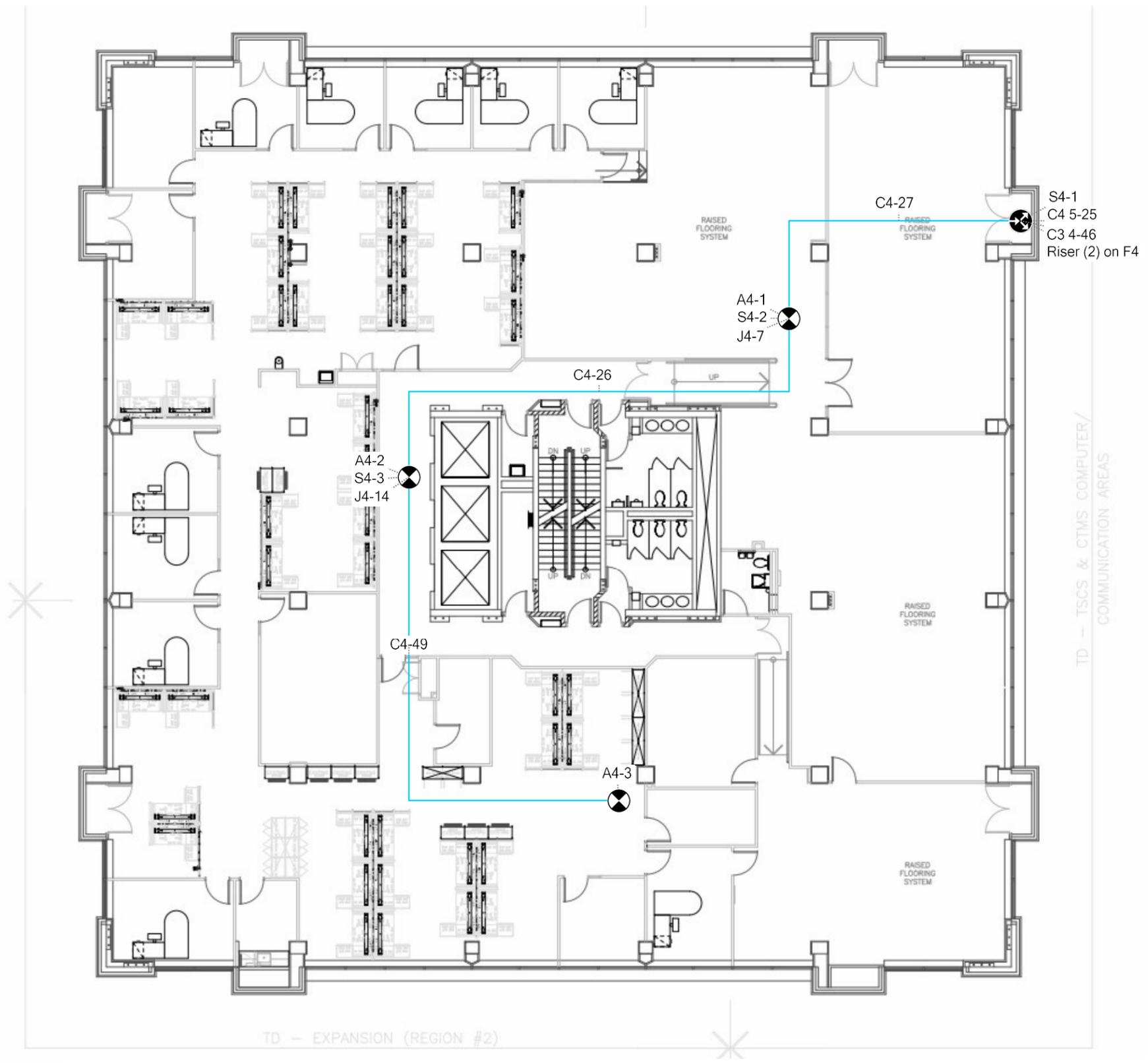
Project name  
703 Don Mills

Designer name  
RF Engineering

F5

12/08/2024





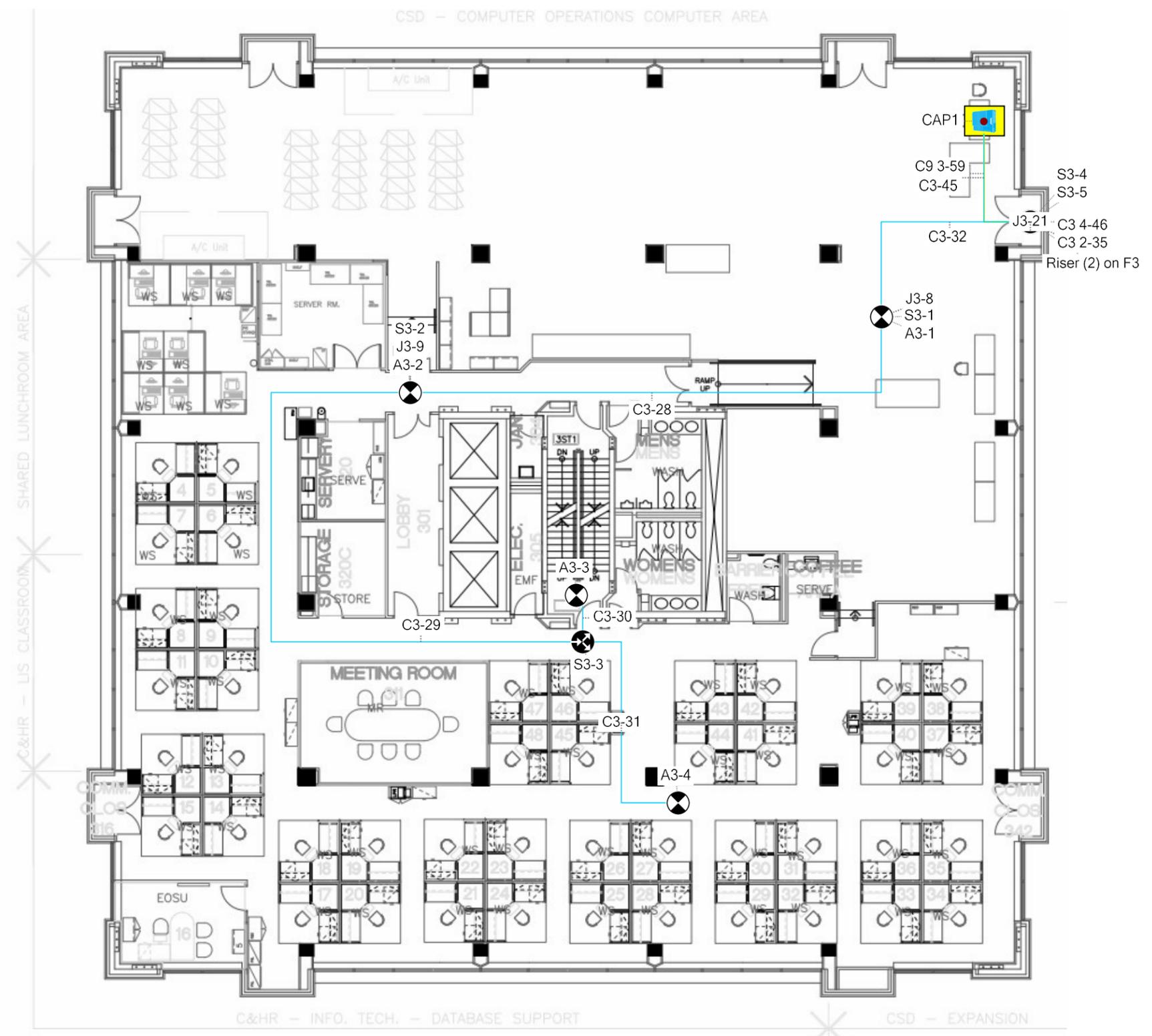
Revision history	Rev	Date	Author
1.0	25/04/2024	RF Engineering	Preliminary Design
1.1	05/06/2024	RF Engineering	Relocate BDA, CAN & CAP-M location from PH to...
1.2	12/08/2024	RF Engineering	Issued for tender

Project name  
703 Don Mills

Designer name  
RF Engineering

F4

12/08/2024



Revision history	Rev	Date	Author
1.0	25/04/2024	RF Engineering	Preliminary Design
1.1	05/06/2024	RF Engineering	Relocate BDA, CAN & CAP-M location from PH to...
1.2	12/08/2024	RF Engineering	Issued for tender

Project name  
**703 Don Mills**

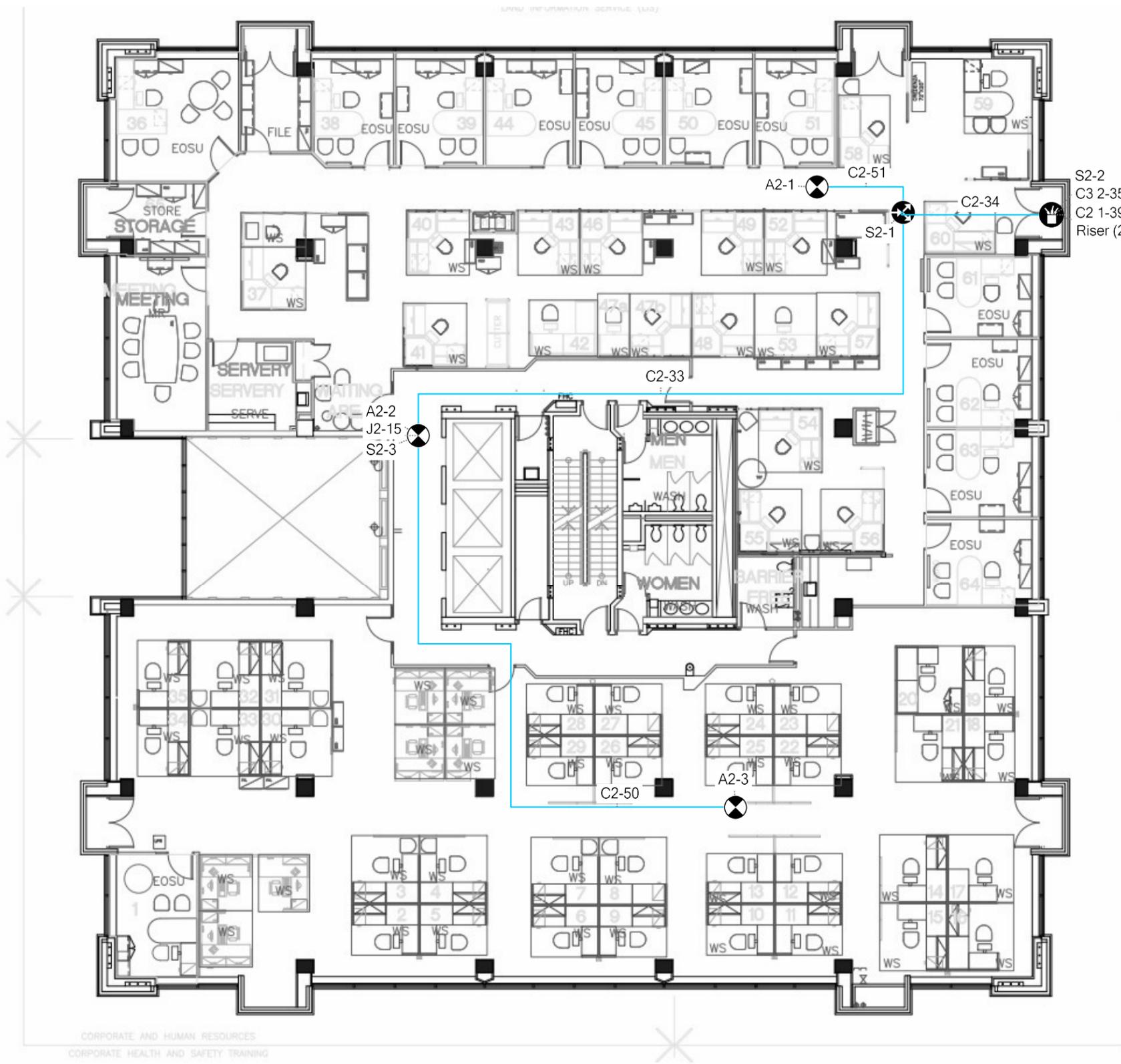
Designer name  
RF Engineering

F3

12/08/2024

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S2-2  
C3 2-35  
C2 1-39  
Riser (2) on F2

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Revision history		Author
Rev	Date	RF Engineering
1.0	25/04/2024	RF Engineering
Preliminary Design		
1.1	05/06/2024	RF Engineering
Relocate BDA, CAN & CAP-M location from PH to...		
1.2	12/08/2024	RF Engineering
Issued for tender		

Project name  
**703 Don Mills**

Designer name  
RF Engineering

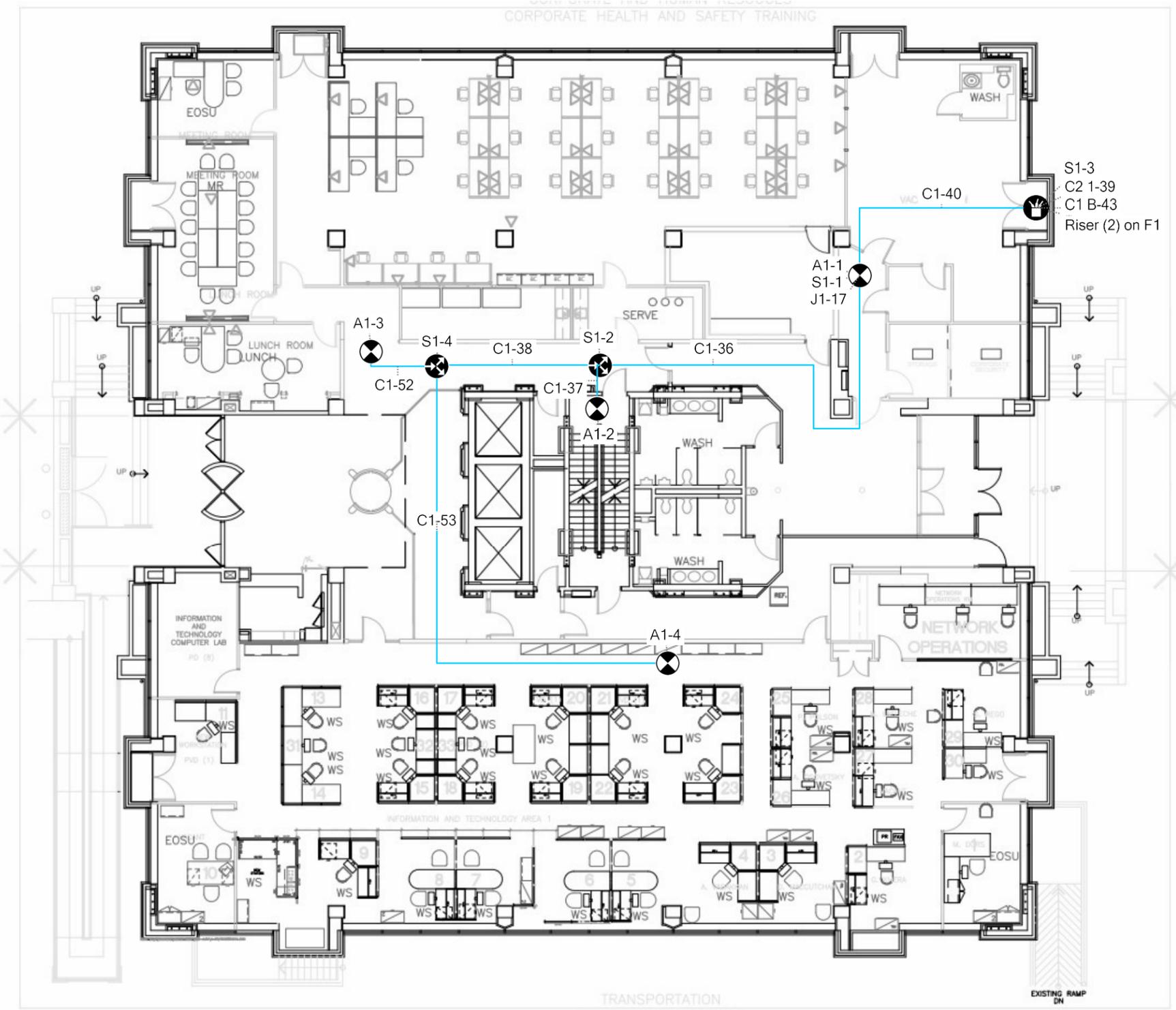
F2

12/08/2024

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CORPORATE AND HUMAN RESOURCES  
CORPORATE HEALTH AND SAFETY TRAINING



S1-3  
C2 1-39  
C1 B-43  
Riser (2) on F1

Linkwave Wireless Solutions

Revision history	Rev	Date	Author
1.0	25/04/2024	RF Engineering	Preliminary Design
1.1	05/06/2024	RF Engineering	Relocate BDA, CAN & CAP-M location from PH to...
1.2	12/08/2024	RF Engineering	Issued for tender

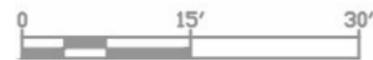
Project name  
**703 Don Mills**

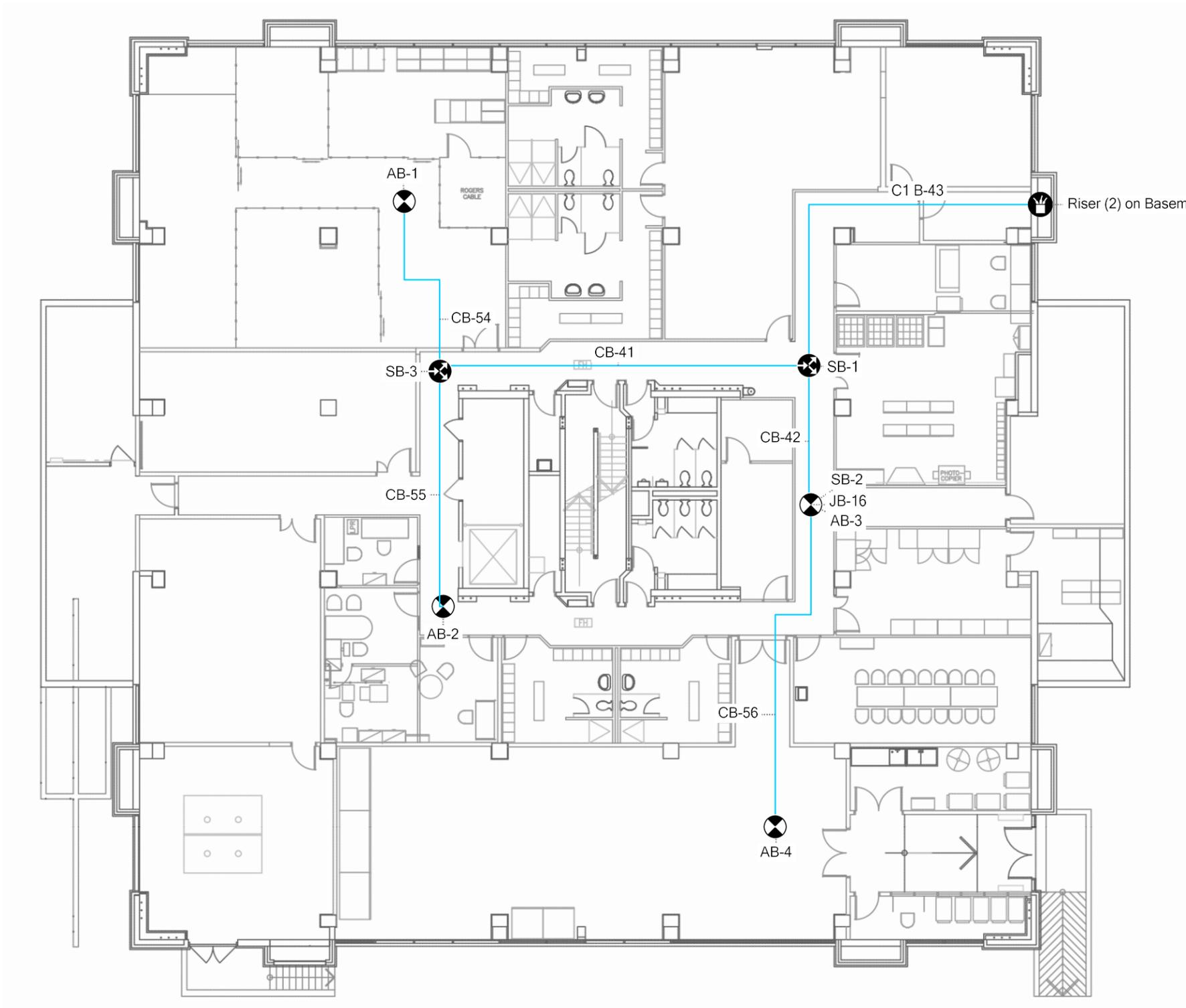
Designer name  
RF Engineering

F1

12/08/2024

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Linkwave Wireless Solutions

Revision history	Rev	Date	Author
	1.0	25/04/2024	RF Engineering
Preliminary Design			
	1.1	05/06/2024	RF Engineering
Relocate BDA, CAN & CAP-M location from PH to...			
	1.2	12/08/2024	RF Engineering
Issued for tender			

Project name  
703 Don Mills

Designer name  
RF Engineering

Basement

12/08/2024

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# LEGENDS

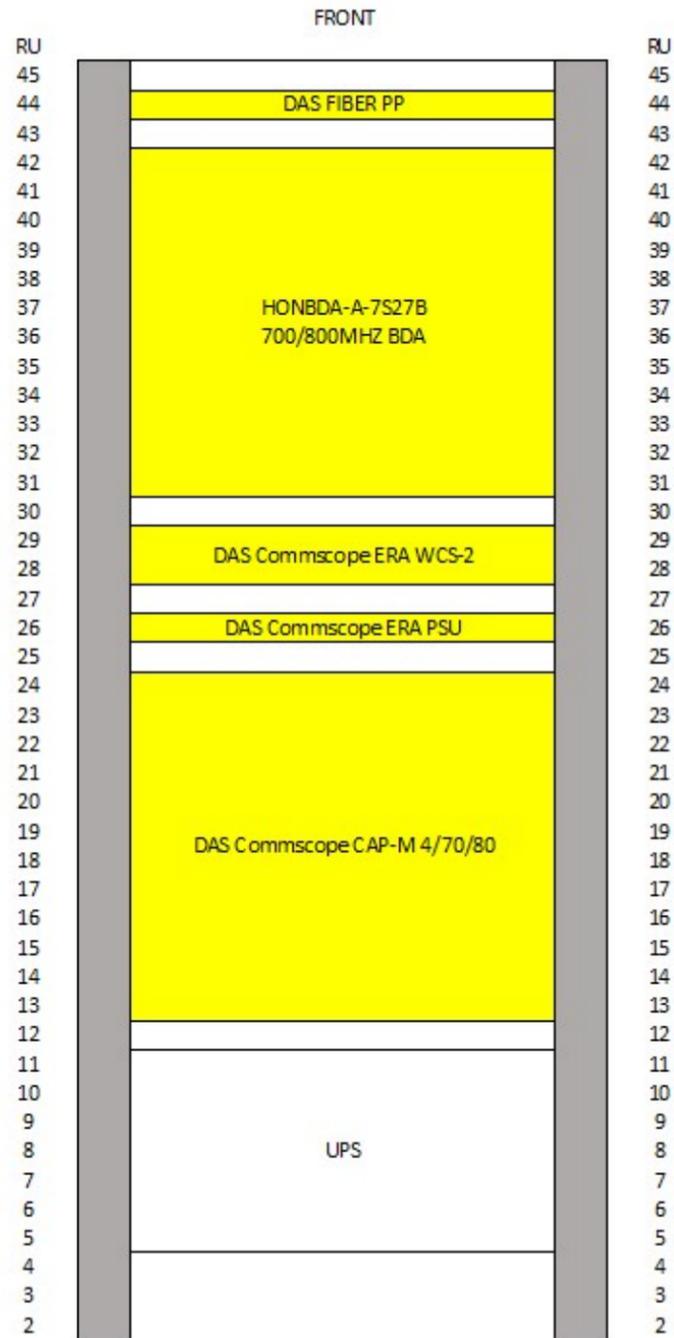
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	Antenna
	Attenuator
	BDA
	CAP
	Fiber BDA Hub
	Filter
	Polyphaser
	Riser
	Splitter
	Via

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	ICA12-50JPLLW
	JMA-4M4M-14F1-2M
	P-024-OD-8W-FSUBK
	P2RFC-2064-79
	P2RFC-2175-79
	P2RFC-4098-79

	Title	Legends 703 Don Mills	Designer name	RF Engineering
	Company	Linkwave Wireless Solutions	Date	12/08/2024

# HEAD END ROOM

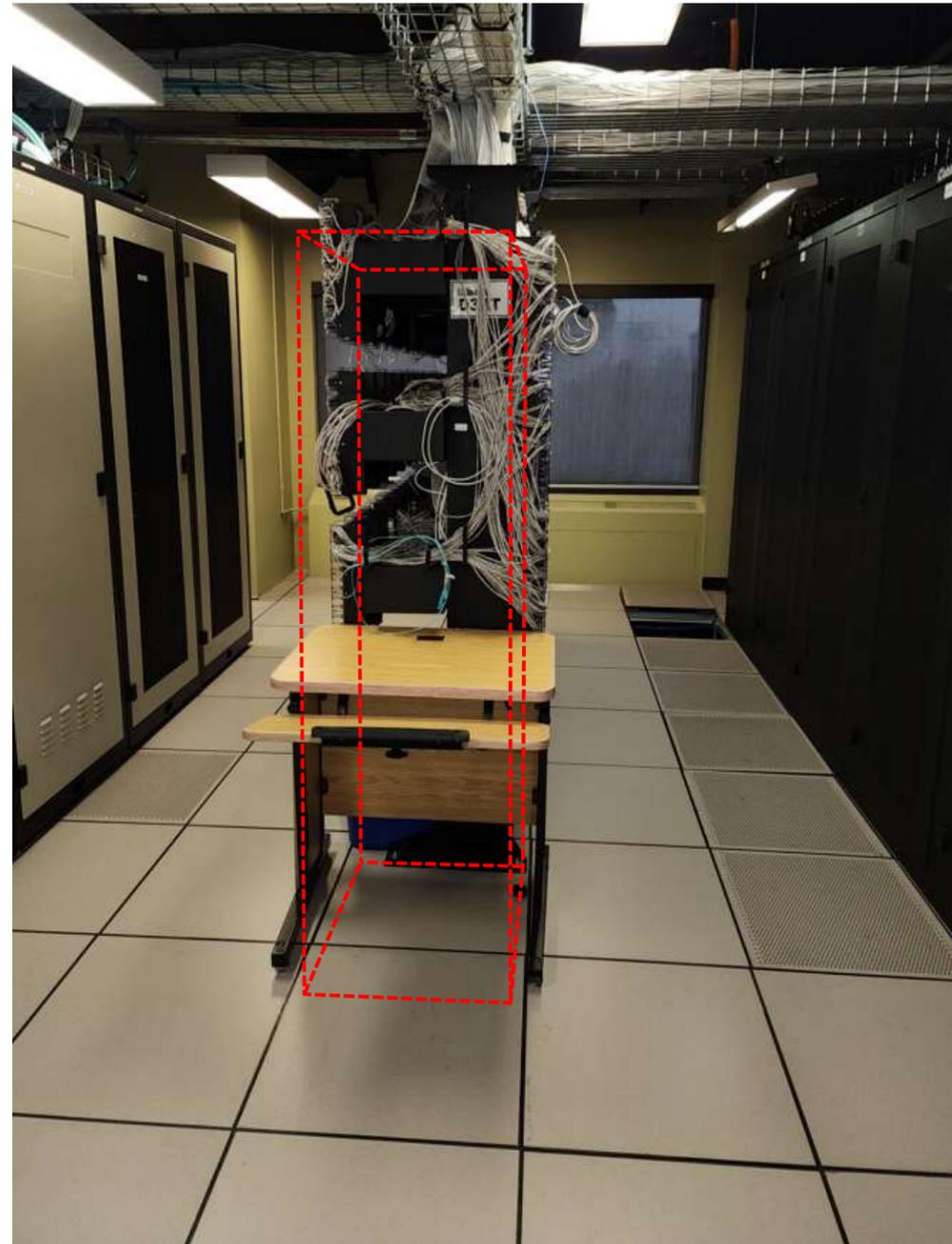
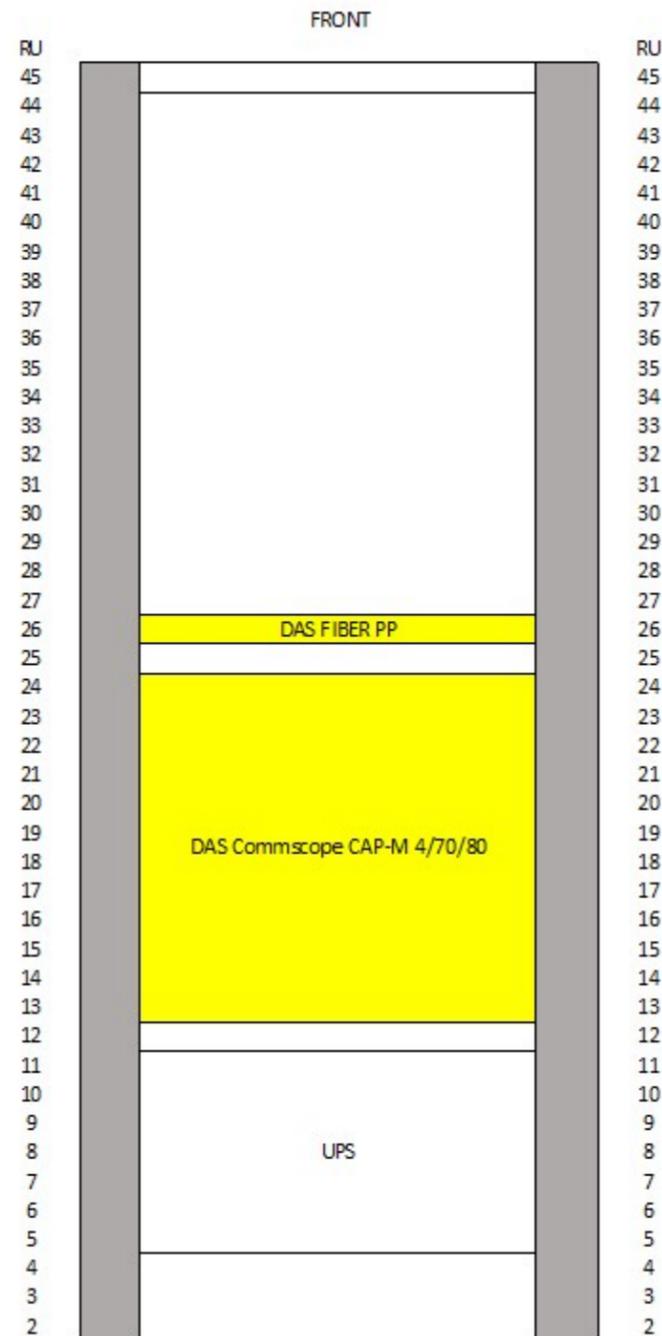
Floor 9 Server Room



	Title	Head End Room 703 Don Mills	Designer name	RF Engineering
	Company	Linkwave Wireless Solutions	Date	12/08/2024

# REMOTE EQUIPMENT ROOM

FLOOR 3 - SERVER ROOM



	Title	Remote Equipment Room 703 Don Mills	Designer name	RF Engineering
	Company	Linkwave Wireless Solutions	Date	12/08/2024