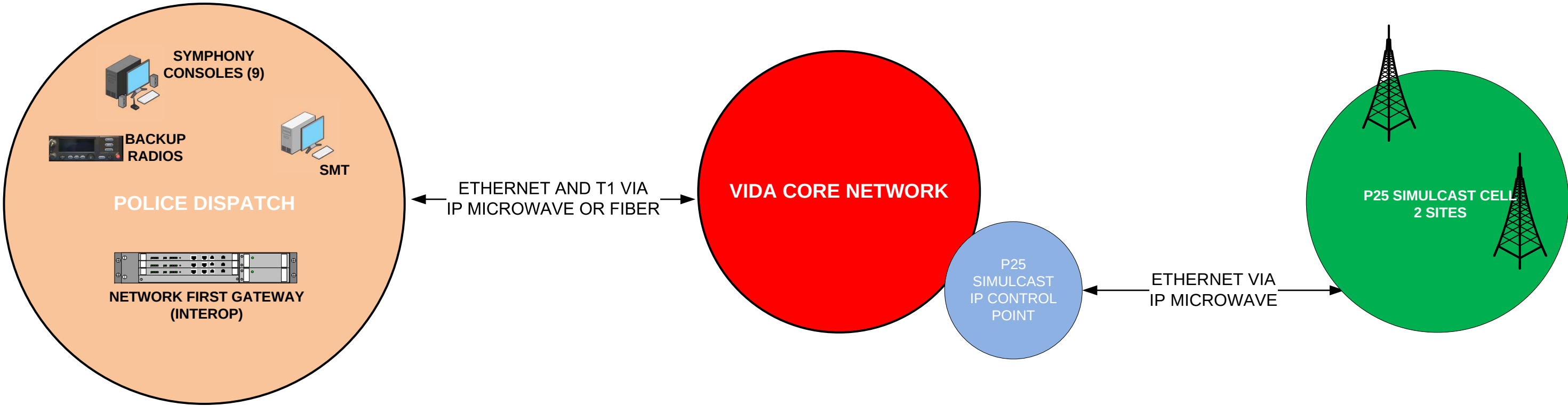
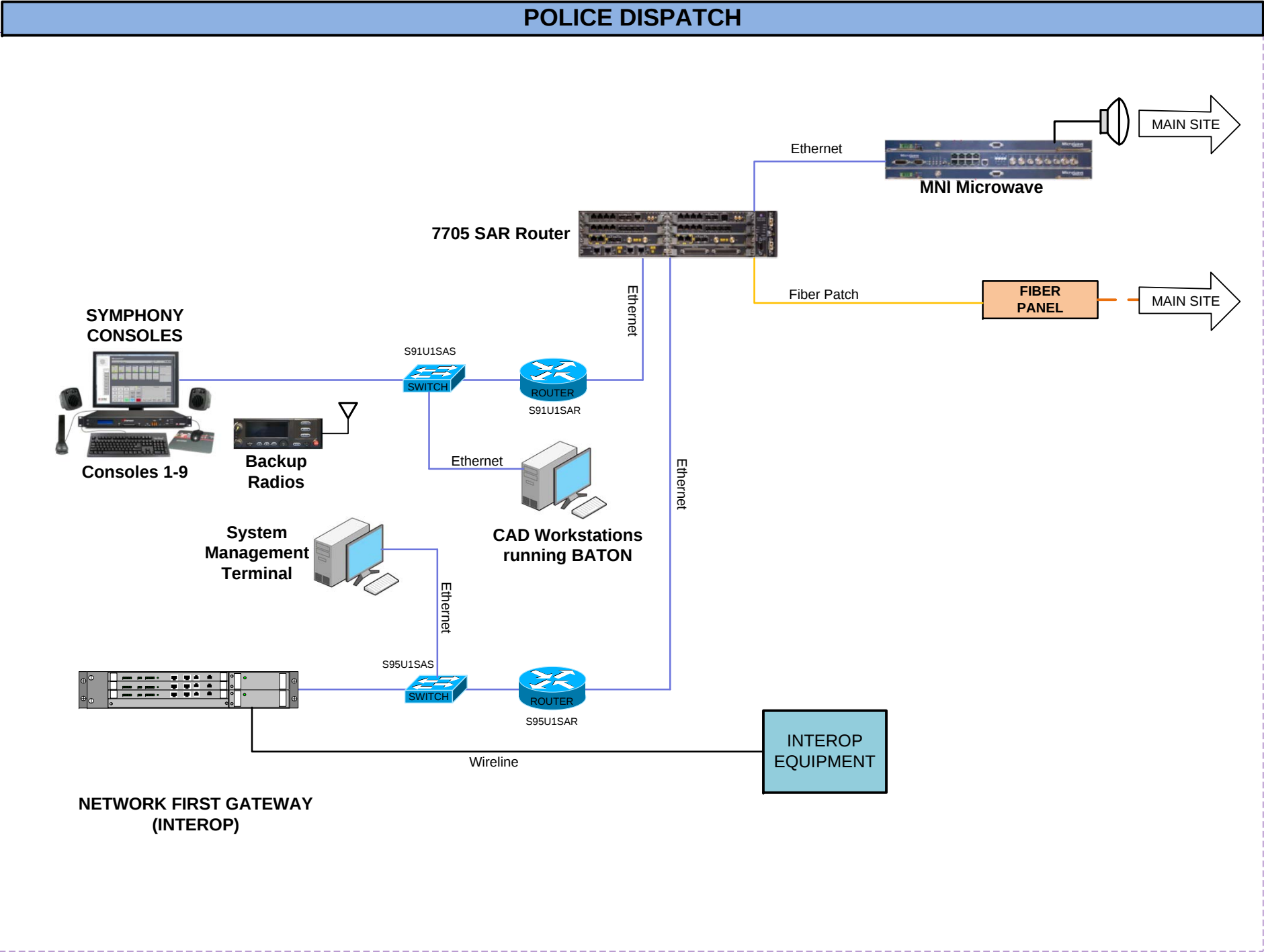
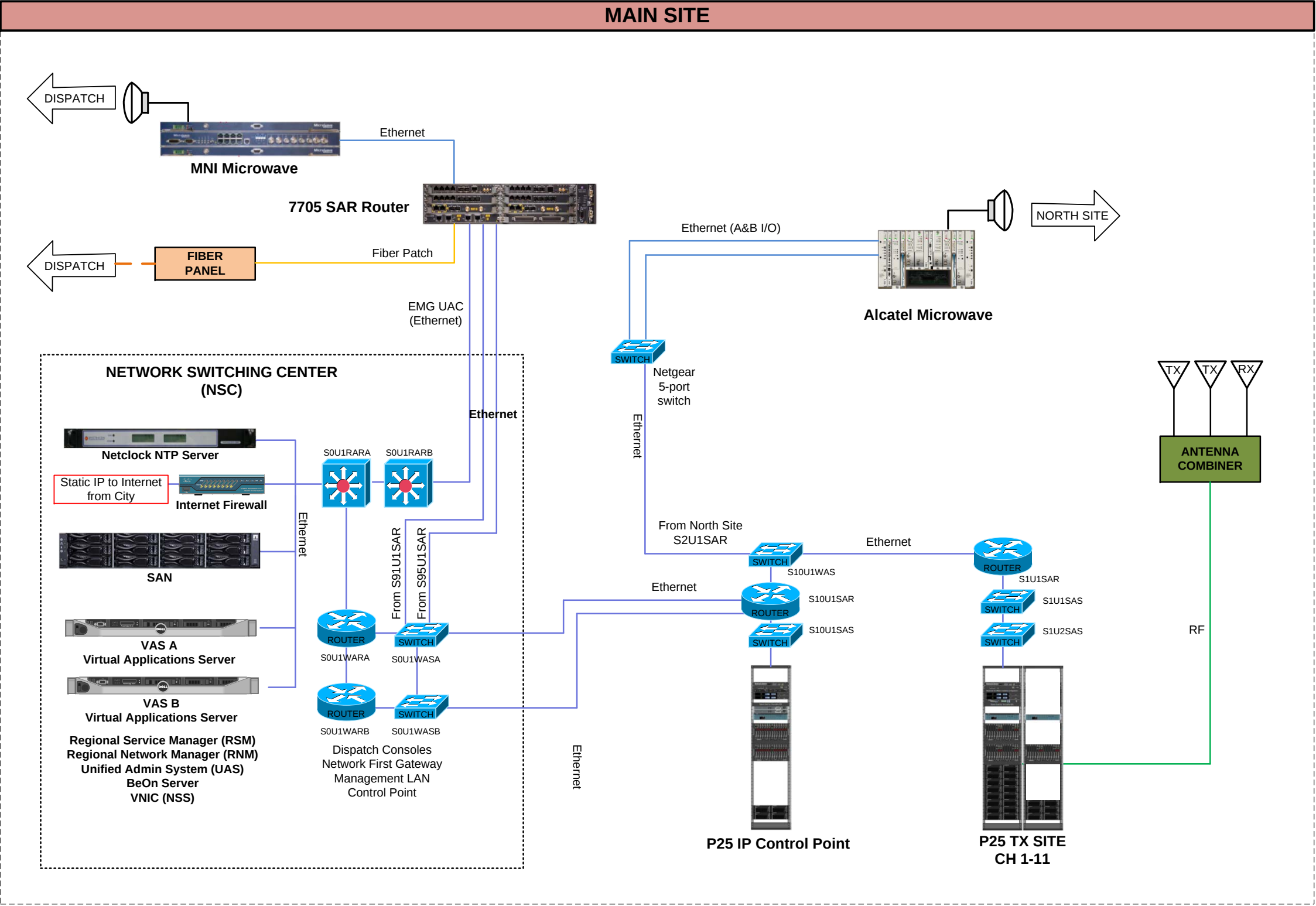
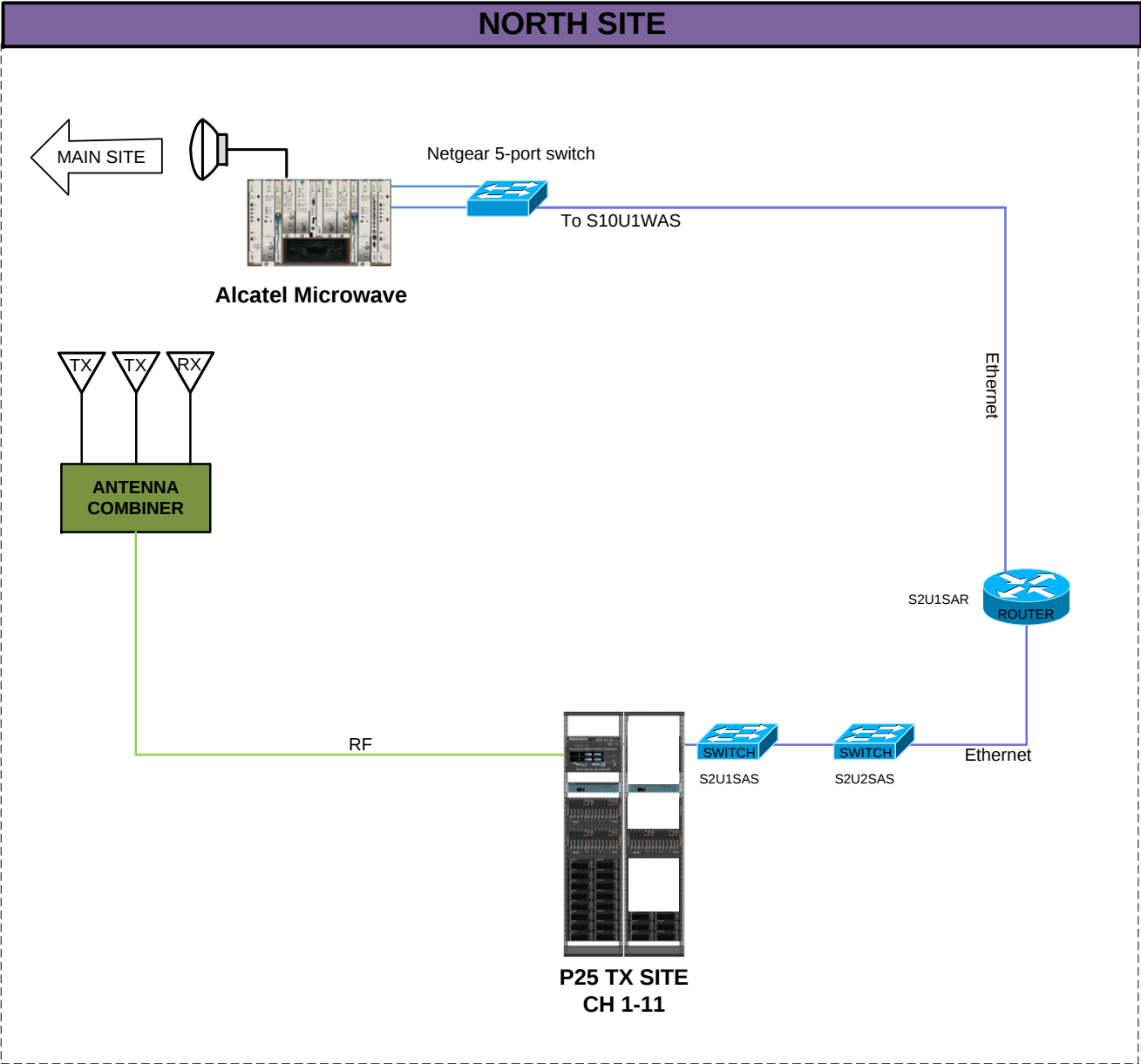










 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER P25 SIMULCAST SYSTEM		SYSTEM OVERVIEW	
		NORTH SITE BLOCK DIAGRAM	
PREPARED BY: Kasey Crow			
DATE: 4-18-2017			
DWG: CLSYS-1000		REV. G	SHEET 4 OF 4

CITY OF CLEARWATER
POLICE DISPATCH CENTER SITE – DRAWING INDEX

DRAWING	DESCRIPTION
CLDISP-10301	EQUIPMENT ROOM FLOORPLAN
CLDISP-10302	RACK ELEVATIONS
CLDISP-10303	CONNECTION DIAGRAMS
CLDISP-10304	DISPATCH FLOOR
CLDISP-10307	ANTENNA SYSTEMS
CLDISP-10308	NFG PUNCH BLOCK DRAWINGS

10 Feet

8 Feet

3'-0"

Note 1

FRONT

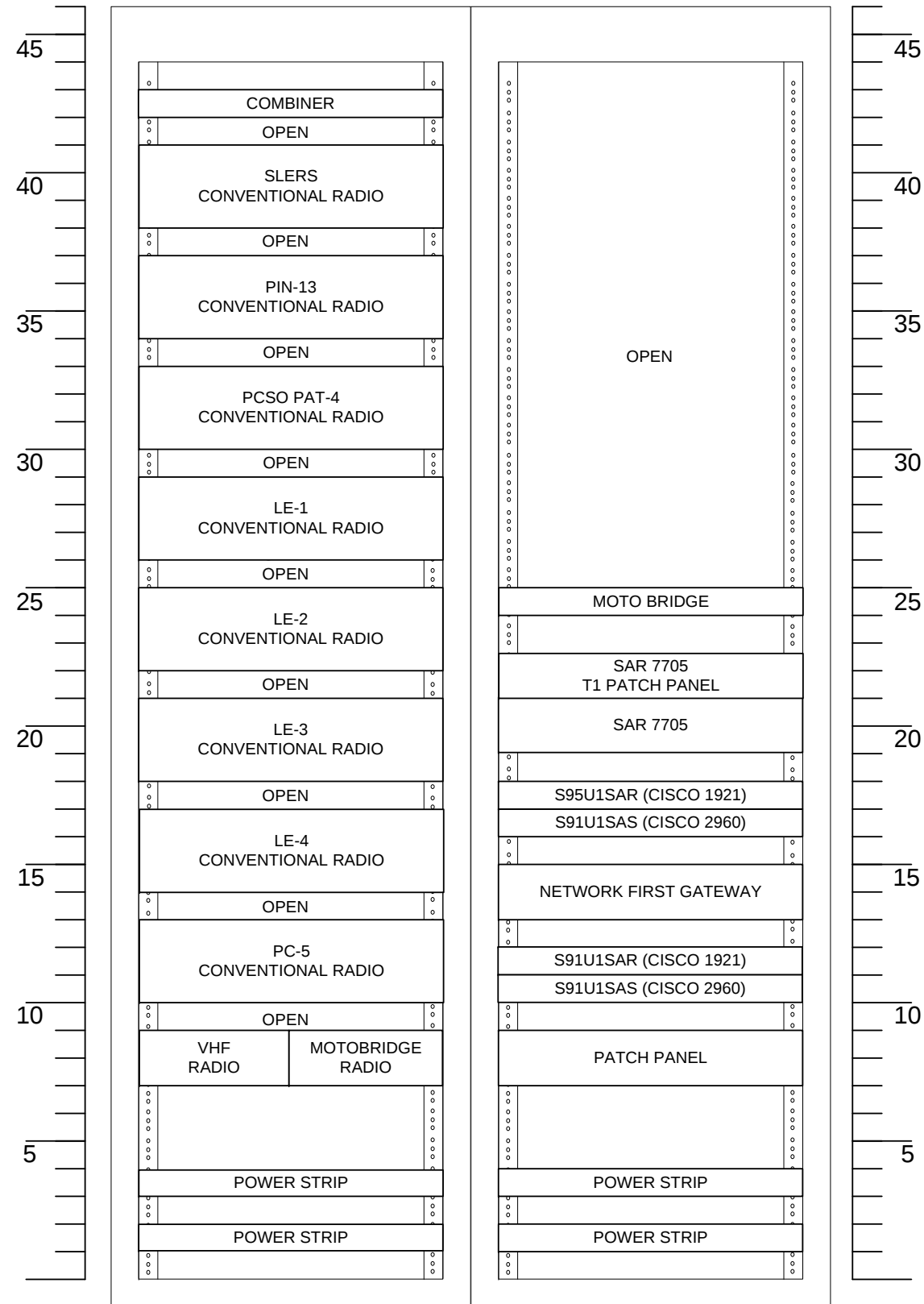
NETWORK
EQUIPMENT
MOTOBRIDGE

CONVENTIONAL
COMBINER AND
CONTROL
STATIONS

MDF

NOTE 1: MGB and coaxial protectors located under floor in this area.

 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		DISPATCH	
		EQUIPMENT ROOM FLOORPLAN	
PREPARED BY: Kasey Crow			
DATE: 10/27/2017			
DWG: CLDISP-10301			
REV: G		SHEET 1 OF 1	



CONVENTIONAL RADIO RACK

CONSOLE AND NFG NETWORK RACK

 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		DISPATCH	
		RADIO ROOM RACK ELEVATION	
PREPARED BY: Kasey Crow			
DATE: 10/27/2017			
DWG: CLDISP-10302			
		REV H	SHEET 1 OF 1

CONSOLE
CABLE A & B
PATCH PANEL

NOTE: CABLE B
CONNECTED TO PORTS
25-33 FOR FUTURE USE

CONSOLE
SAS

CONSOLE
SAR

NFG SAS

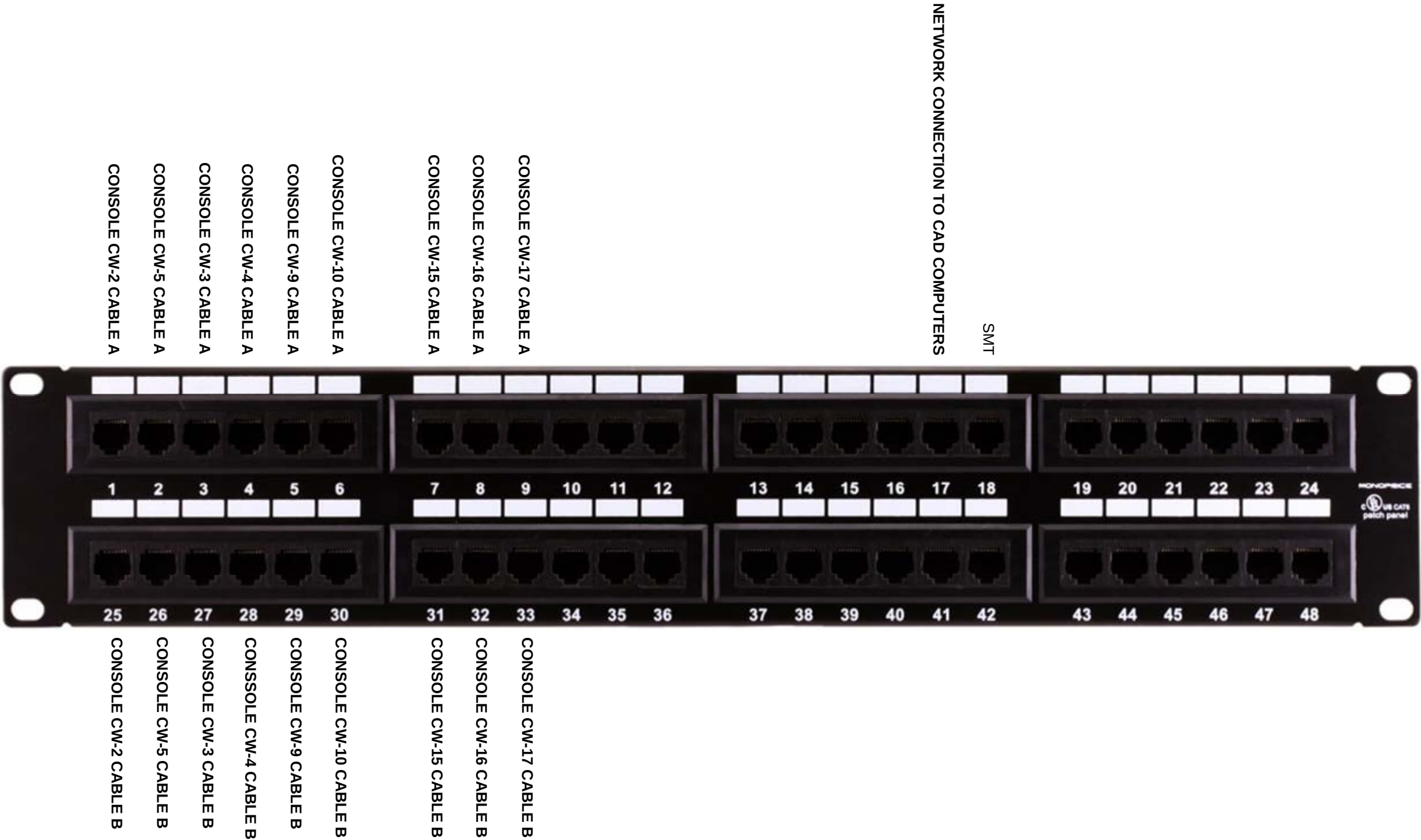
NFG SAR

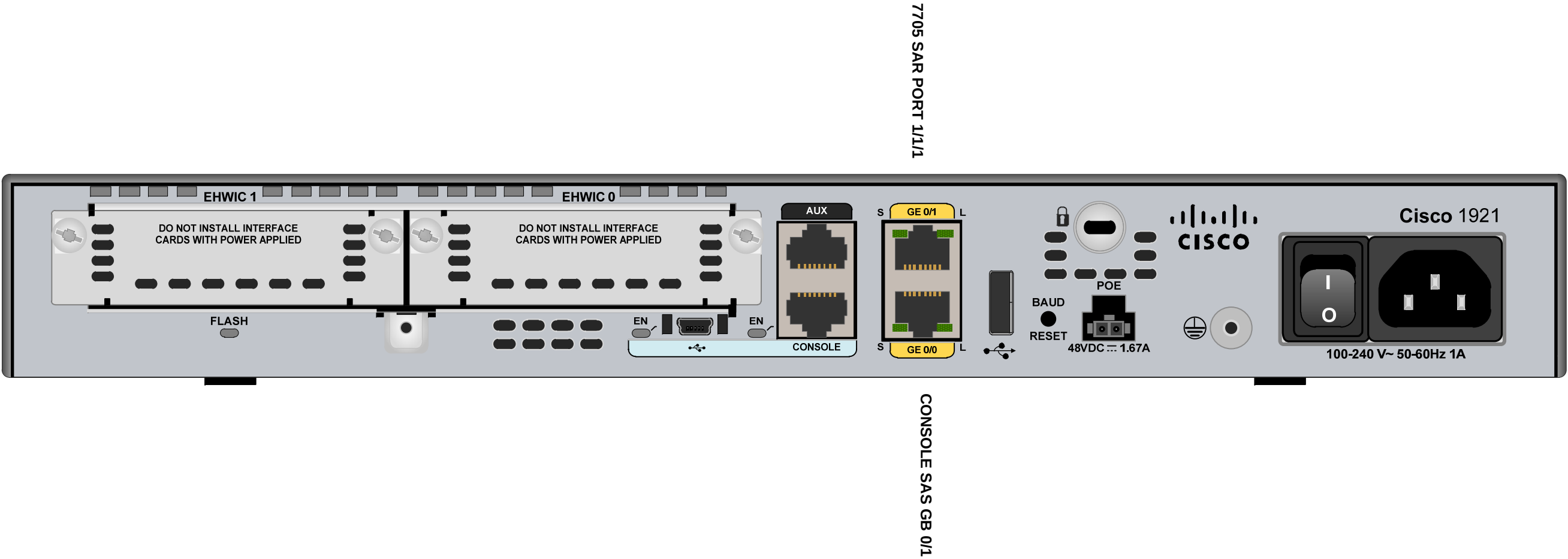
NFG UAC 3
NFG UAC 2
NFG UAC 1

SAR 7705

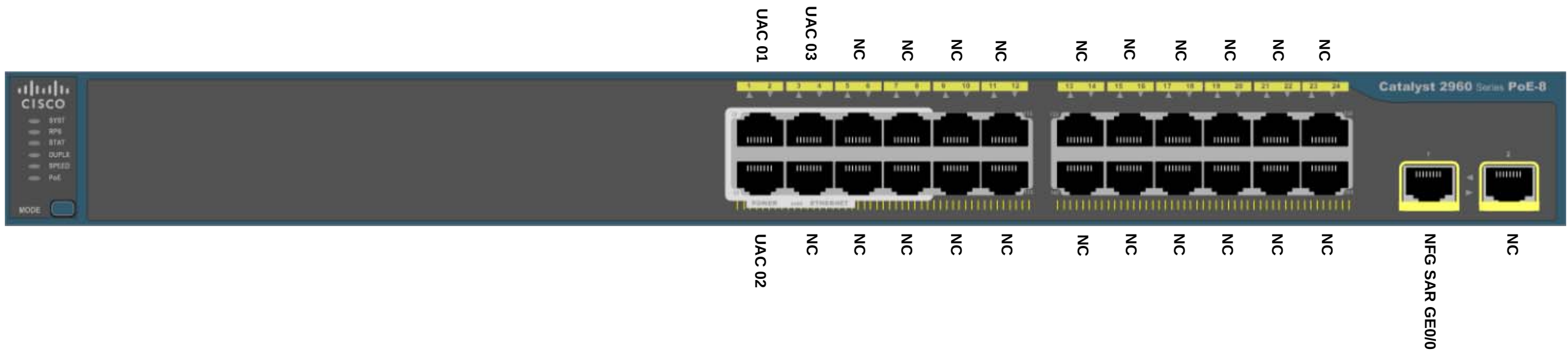
ETHERNET to MNI Microwave

Fiber

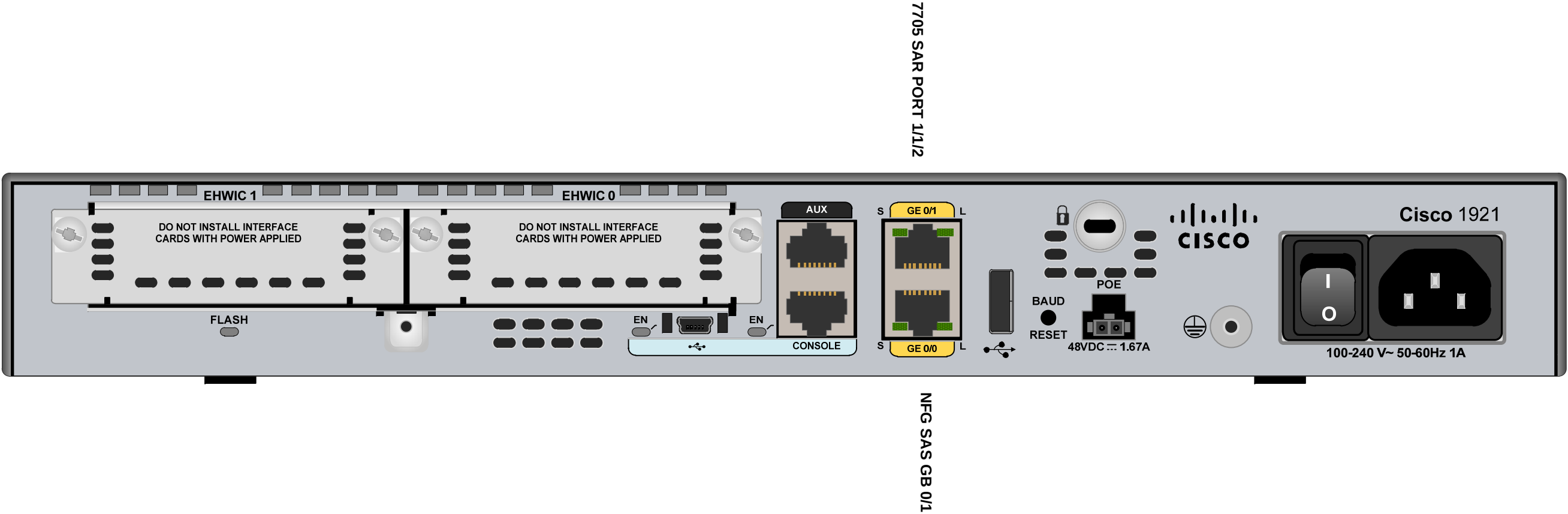




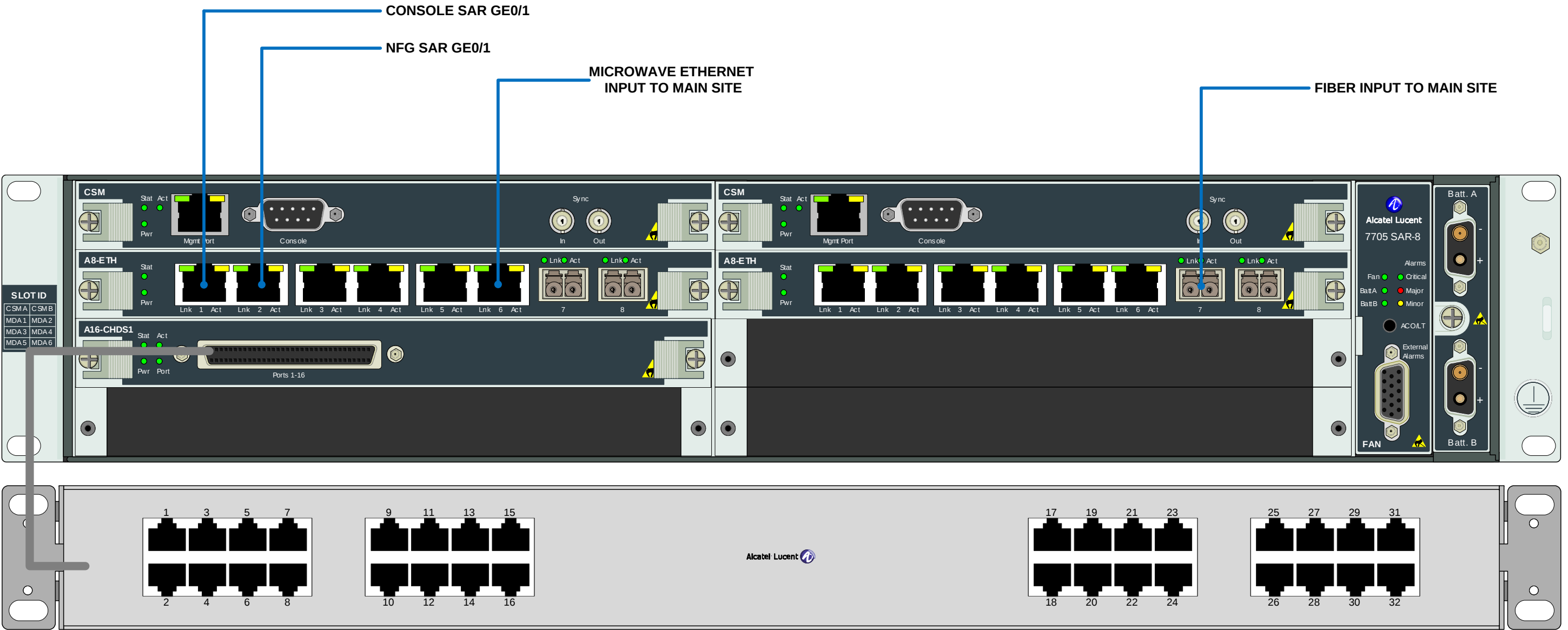
 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		DISPATCH CENTER	
		CONSOLE SAR CONNECTION DIAGRAM	
PREPARED BY: Kasey Crow			
DATE: 10/27/2017			
DWG: CLDISP-10303			
		REV G	SHEET 4 OF 8

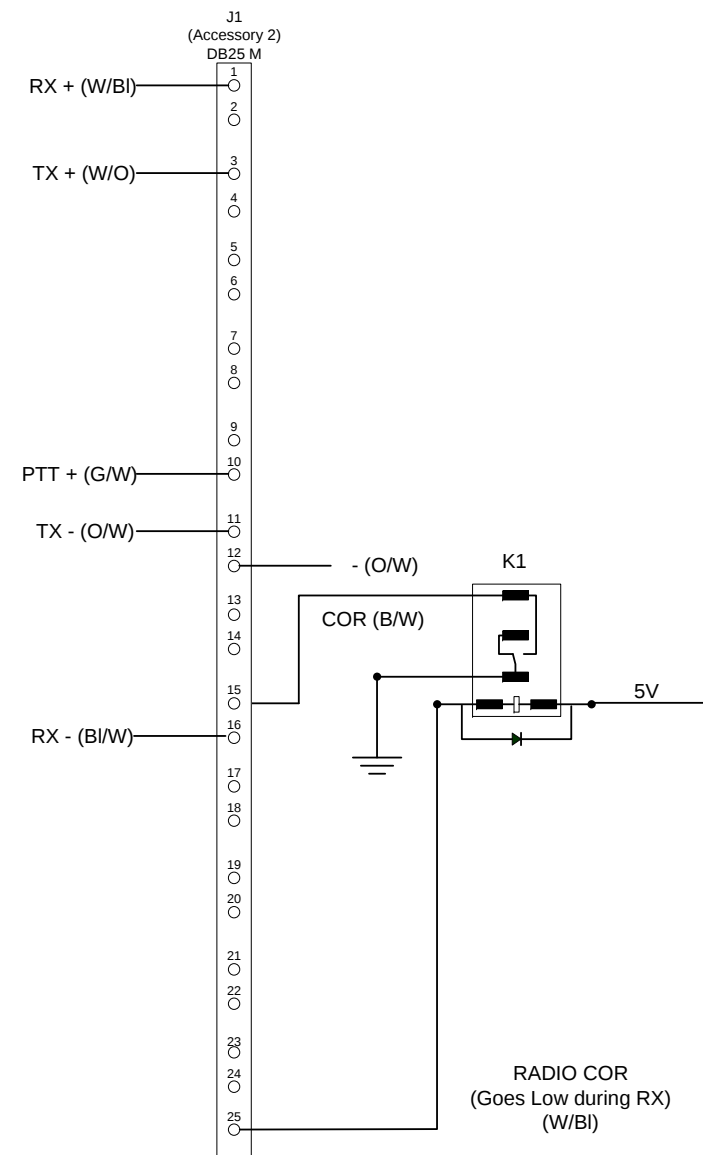


 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		DISPATCH CENTER	
		NFG SAS CONNECTION DIAGRAM	
PREPARED BY: Kasey Crow			
DATE: 10/27/2017			
DWG: CLDISP-10303		REV G	SHEET 5 OF 8

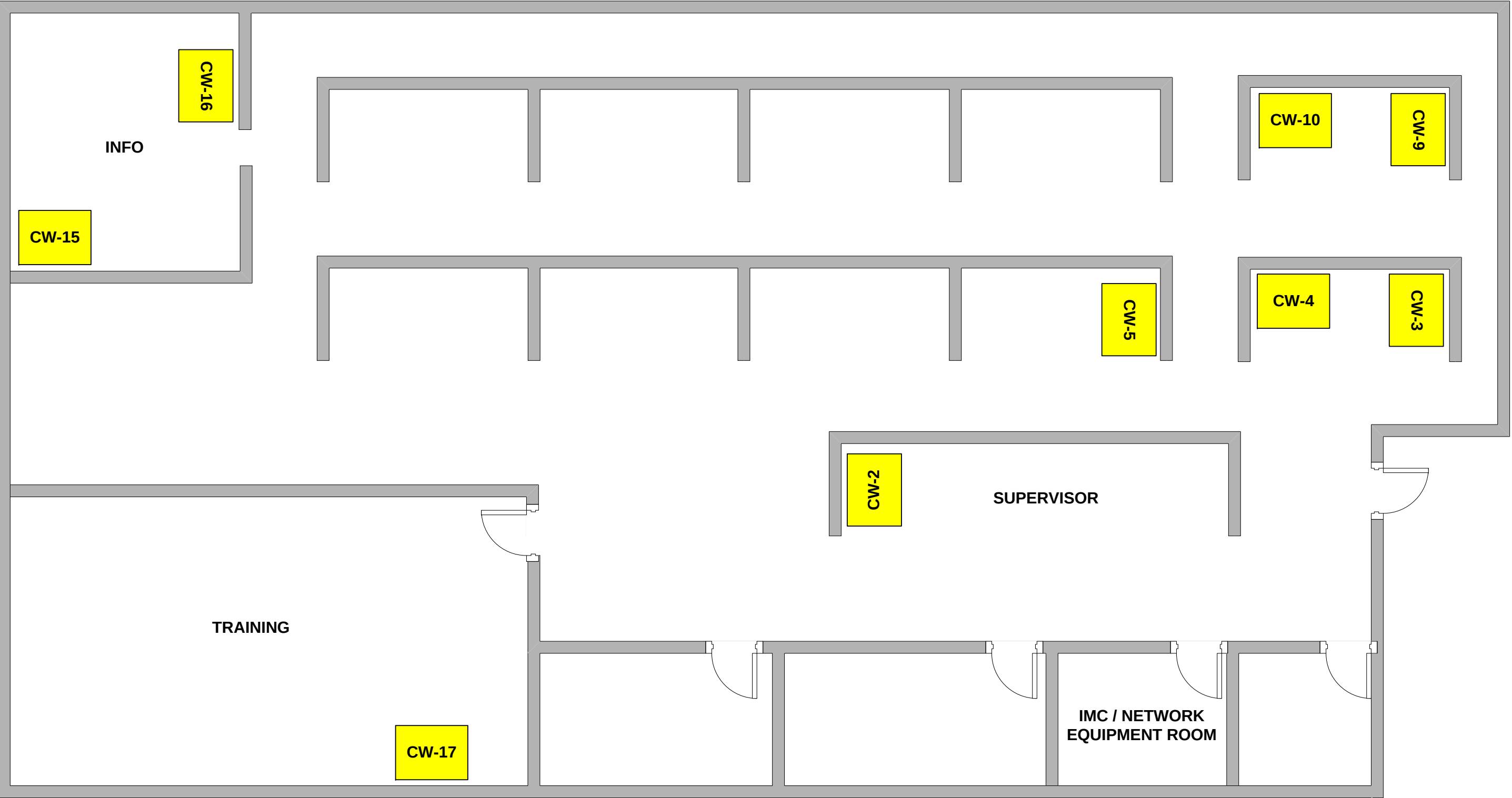


 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		DISPATCH CENTER	
		NFG SAR CONNECTION DIAGRAM	
PREPARED BY: Kasey Crow			
DATE: 10/27/2017			
DWG: CLDISP-10303			
		REV G	SHEET 6 OF 8



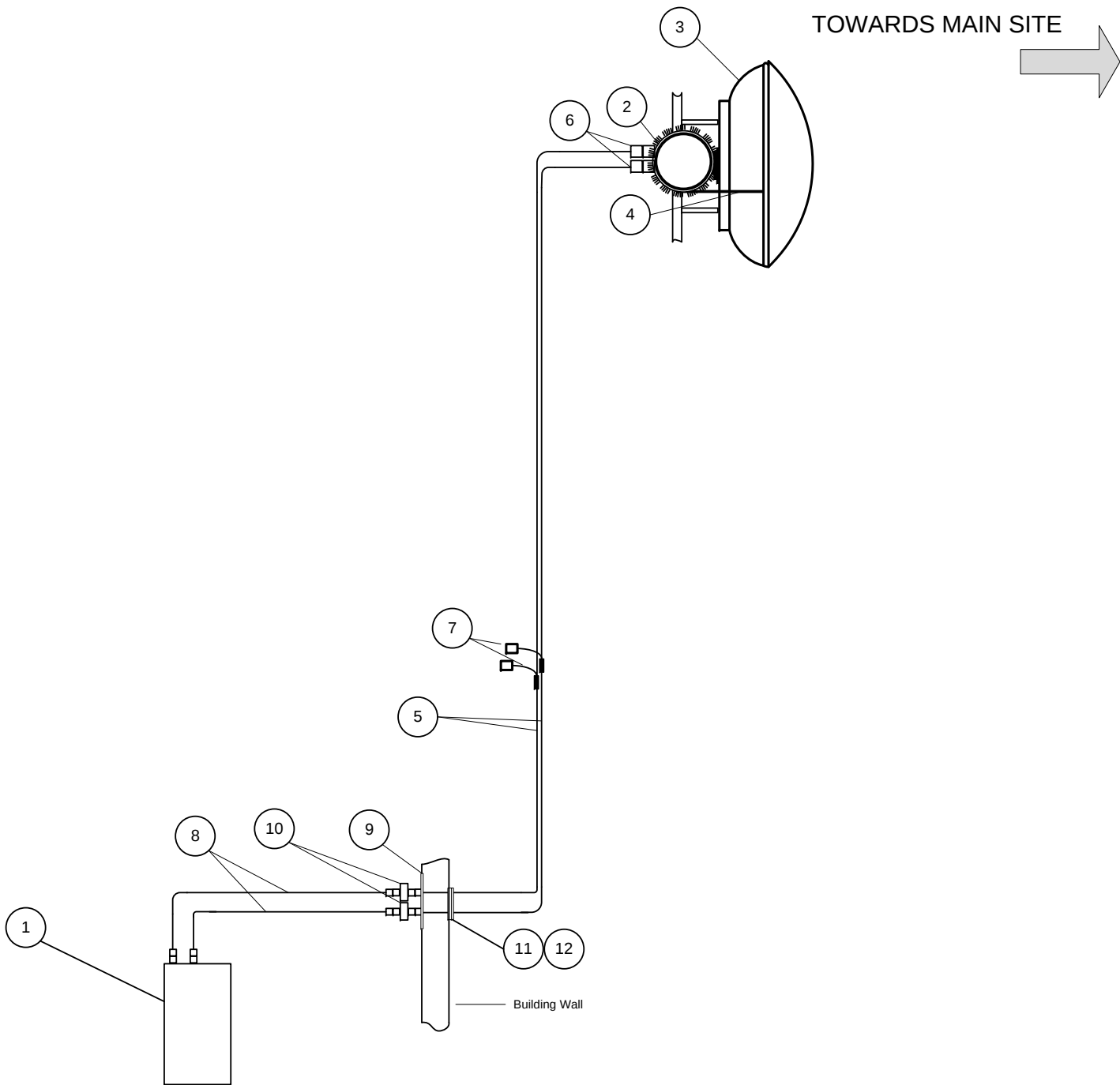


 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		SYSTEM	
		COR ISOLATION CIRCUIT FOR NFG	
PREPARED BY: Kasey Crow			
DATE: 10/27/2017			
DWG: CLDISP-10303			
		REV G	SHEET 8 OF 8

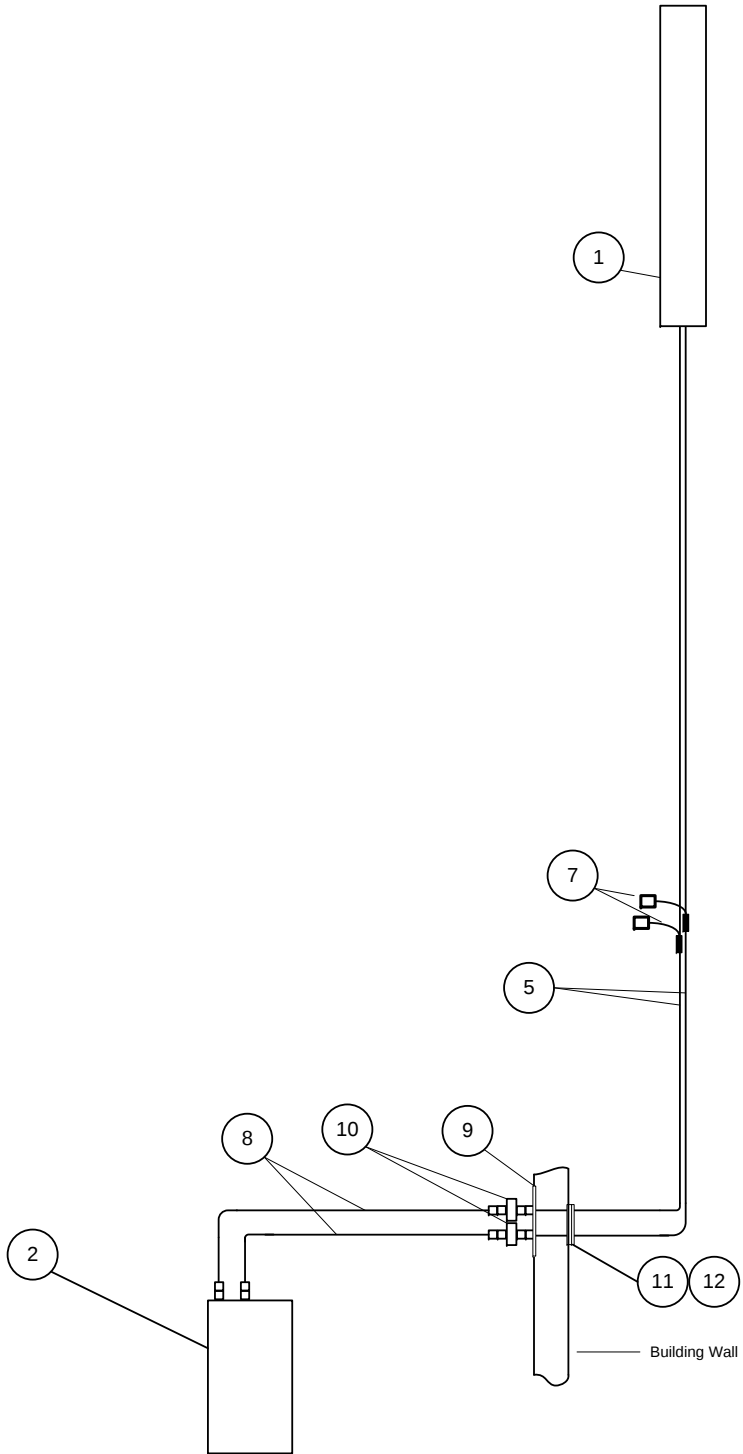


Position	Username	IP Address	Network ID
CW-2	Console-1	10.128.53.1	S91U1CON
CW-3	Console-3	10.128.53.3	S91U3CON
CW-4	Console-4	10.128.53.4	S91U4CON
CW-5	Console-5	10.128.53.2	S91U2CON
CW-9	Console-9	10.128.53.5	S91U5CON
CW-10	Console-10	10.128.53.6	S91U6CON
CW-15	Console-15	10.128.53.7	S91U7CON
CW-16	Console-16	10.128.53.8	S91U8CON
CW-17	Console-17	10.128.53.9	S91U9CON

ITEM	H-F ITEM NO.	VENDOR	DESCRIPTION	DISPATCH			
				TO			
				MAIN			
1	1.01	MNI	PROTEUS MX, 11GHz 50MB Ethernet MHSB	1			
2		MNI	ODU	2			
3		COMMSCOPE	VHLP800-11-6WH, 3' Dish w/Radome	1			
4			38891A SIDE STRUTS	1			
5		EUPEN	EC4-50 1/2" Hardline	1			
6		EUPEN	NM50V12 1/2" N Male Connector	6			
7		EUPEN	GKC12 Ground Kit	1			
8		TIMES	LMR-400 1/2" Coaxial Cable	1			
9		Polyphaser	Port Entry Panel and Ground System	1			
10		Polyphaser	Surge Suppressor	2			
11			48950-1 WALL FEED THRU PLATE, SINGLE OPENING	1			
12			48939-63 5-INCH BOOT	1			
			TRANSMIT FREQUENCY / POLARIZATION	10855V			
			AZIMUTH	152.8			
			AGL ELEVATION	29			



ITEM	H-F ITEM NO.	VENDOR	DESCRIPTION	
1	1.01	dB Spectra	DS7A06F36D-N 746-869 Dual Omni Antenna	1
2		dB Spectra	8 Port 800MHz Combiner	1
3				
4				
5		EUPEN	EC4-50 1/2" Hardline	1
6		EUPEN	NM50V12 1/2" N Male Connector	6
7		EUPEN	GKC12 Ground Kit	1
8		TIMES	LMR-400 1/2" Coaxial Cable	1
9		Polyphaser	Port Entry Panel and Ground System	1
10		Polyphaser	Surge Suppressor	2
11			48950-1 WALL FEED THRU PLATE, SINGLE OPENING	1
12			48939-63 5-INCH BOOT	1
		TRANSMIT FREQUENCY / POLARIZATION		800MHz
		AZIMUTH		OMNI

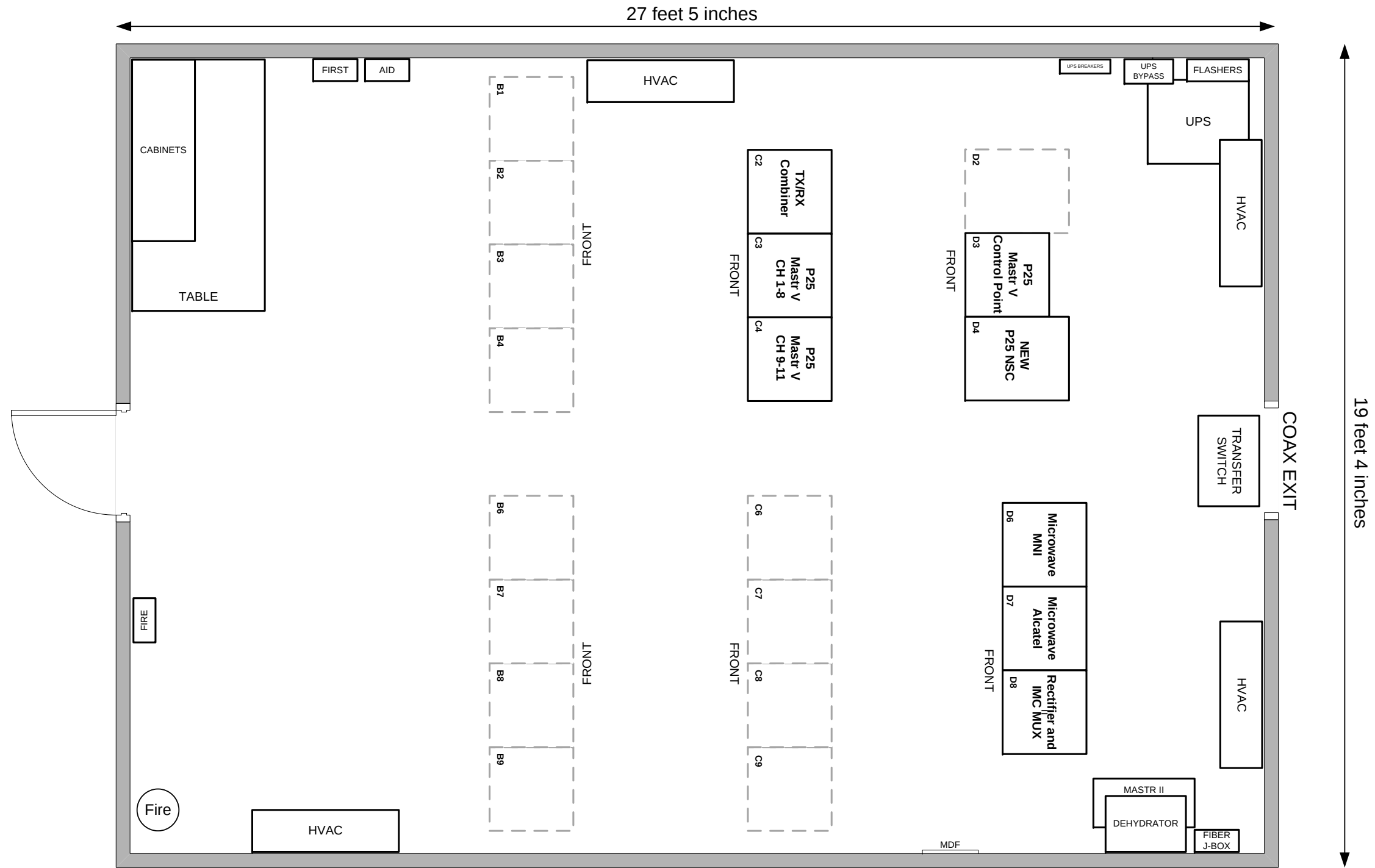


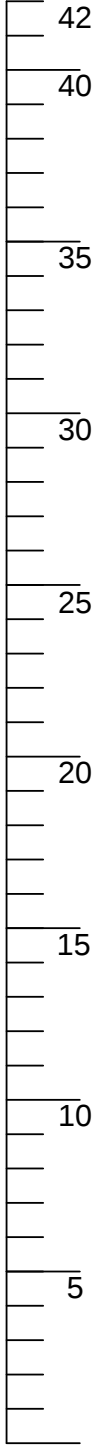
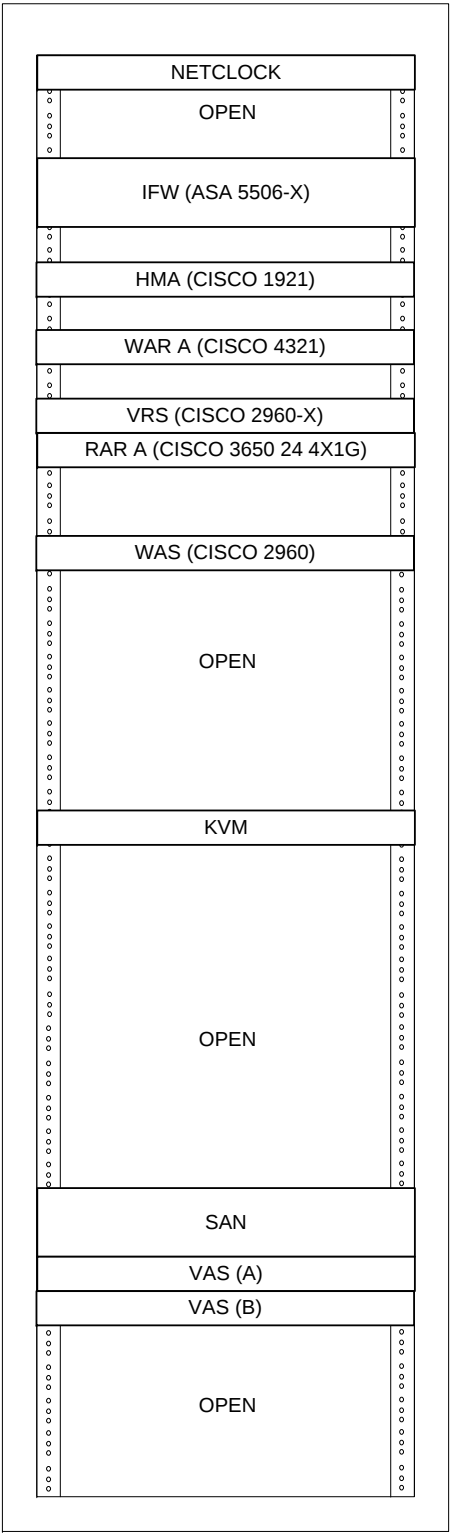
TITLE: NETWORK FIRST GATEWAY CHANNELS 1-6					PB#: PBJ01
J1: RACK 02 B01 J14					J2:
PB Row	COLUMNS A & B CONNECTED TO	Telco PIN	Telco Wire Color	CIRCUIT DESCRIPTION	COLUMNS C & D CONNECTED TO
1	J01 PIN 02	26		SLERS TX AUDIO OUT -	SLERS DB25 W/Or
2	J01 PIN 01	1		SLERS TX AUDIO OUT +	SLERS DB25 Or
3	J01 PIN 04	27		SLERS RX AUDIO IN -	SLERS DB25 W/BI
4	J01 PIN 03	2		SLERS RX AUDIO IN +	SLERS DB25 BI
5	J01 PIN 06	28		SLERS COR GROUND	SLERS DB25 Br
6	J01 PIN 05	3		SLERS COR INPUT	SLERS DB25 W/Br
7	J01 PIN 08	29		SLERS PTT GROUND	SLERS DB25 Gr
8	J01 PIN 07	4		SLERS PTT OUTPUT	SLERS DB25 W/Gr
9	J02 PIN 02	30		VHF TX AUDIO OUT -	VHF DB25 W/Or
10	J02 PIN 01	5		VHF TX AUDIO OUT +	VHF DB25 Or
11	J02 PIN 04	31		VHF RX AUDIO IN -	VHF DB25 W/BI
12	J02 PIN 03	6		VHF RX AUDIO IN +	VHF DB25 BI
13	J02 PIN 06	32		VHF COR GROUND	VHF DB25 W/Br
14	J02 PIN 05	7		VHF COR INPUT	VHF DB25 Br
15	J02 PIN 08	33		VHF PTT GROUND	VHF DB25 W/Gr
16	J02 PIN 07	8		VHF PTT OUTPUT	VHF DB25 Gr
17	J03 PIN 02	34		LE-2 TX AUDIO OUT -	LE-2 DB25 W/Or
18	J03 PIN 01	9		LE-2 TX AUDIO OUT +	LE-2 DB25 Or
19	J03 PIN 04	35		LE-2 RX AUDIO IN -	LE-2 DB25 W/BI
20	J03 PIN 03	10		LE-2 RX AUDIO IN +	LE-2 DB25 BI
21	J03 PIN 06	36		LE-2 COR GROUND	LE-2 DB25 W/Br
22	J03 PIN 05	11		LE-2 COR INPUT	LE-2 DB25 Br
23	J03 PIN 08	37		LE-2 PTT GROUND	LE-2 DB25 W/Gr
24	J03 PIN 07	12		LE-2 PTT OUTPUT	LE-2 DB25 Gr
25	J04 PIN 02	38		PCSO PAT-4 TX AUDIO OUT -	PCSO PAT-4 DB25 W/Or
26	J04 PIN 01	13		PCSO PAT-4 TX AUDIO OUT +	PCSO PAT-4 DB25 Or
27	J04 PIN 04	39		PCSO PAT-4 RX AUDIO IN -	PCSO PAT-4 DB25 W/BI
28	J04 PIN 03	14		PCSO PAT-4 RX AUDIO IN +	PCSO PAT-4 DB25 BI
29	J04 PIN 06	40		PCSO PAT-4 COR GROUND	PCSO PAT-4 DB25 W/Br
30	J04 PIN 05	15		PCSO PAT-4 COR INPUT	PCSO PAT-4 DB25 Br
31	J04 PIN 08	41		PCSO PAT-4 PTT GROUND	PCSO PAT-4 DB25 W/Gr
32	J04 PIN 07	16		PCSO PAT-4 PTT OUTPUT	PCSO PAT-4 DB25 Gr
33	J05 PIN 02	42		LE-1 TX AUDIO OUT -	LE-1 DB25 W/Or
34	J05 PIN 01	17		LE-1 TX AUDIO OUT +	LE-1 DB25 Or
35	J05 PIN 04	43		LE-1 RX AUDIO IN -	LE-1 DB25 W/BI
36	J05 PIN 03	18		LE-1 RX AUDIO IN +	LE-1 DB25 BI
37	J05 PIN 06	44		LE-1 COR GROUND	LE-1 DB25 W/Br
38	J05 PIN 05	19		LE-1 COR INPUT	LE-1 DB25 Br
39	J05 PIN 08	45		LE-1 PTT GROUND	LE-1 DB25 W/Gr
40	J05 PIN 07	20		LE-1 PTT OUTPUT	LE-1 DB25 Gr
41	J06 PIN 02	46		LE-3 TX AUDIO OUT -	LE-3 DB25 W/Or
42	J06 PIN 01	21		LE-3 TX AUDIO OUT +	LE-3 DB25 Or
43	J06 PIN 04	47		LE-3 RX AUDIO IN -	LE-3 DB25 W/BI
44	J06 PIN 03	22		LE-3 RX AUDIO IN +	LE-3 DB25 BI
45	J06 PIN 06	48		LE-3 COR GROUND	LE-3 DB25 W/Br
46	J06 PIN 05	23		LE-3 COR INPUT	LE-3 DB25 Br
47	J06 PIN 08	49		LE-3 PTT GROUND	LE-3 DB25 W/Gr
48	J06 PIN 07	24		LE-3 PTT OUTPUT	LE-3 DB25 Gr
49		50			
50		25			

TITLE: NETWORK FIRST GATEWAY CHANNELS 7-12					PB#: PBK01
J1: RACK 02 B02 J14					J2:
PB Row	COLUMNS A & B CONNECTED TO	Telco PIN	Telco Wire Color	CIRCUIT DESCRIPTION	COLUMNS C & D CONNECTED TO
1	J01 PIN 02	26		LE-4 TX AUDIO OUT -	LE-4 DB25 W/Or
2	J01 PIN 01	1		LE-4 TX AUDIO OUT +	LE-4 DB25 Or
3	J01 PIN 04	27		LE-4 RX AUDIO IN -	LE-4 DB25 W/BI
4	J01 PIN 03	2		LE-4 RX AUDIO IN +	LE-4 DB25 BI
5	J01 PIN 06	28		LE-4 COR GROUND	LE-4 DB25 W/Br
6	J01 PIN 05	3		LE-4 COR INPUT	LE-4 DB25 Br
7	J01 PIN 08	29		LE-4 PTT GROUND	LE-4 DB25 W/Gr
8	J01 PIN 07	4		LE-4 PTT OUTPUT	LE-4 DB25 Gr
9	J02 PIN 02	30		PIN-13 TX AUDIO OUT -	PIN-13 DB25 W/Or
10	J02 PIN 01	5		PIN-13 TX AUDIO OUT +	PIN-13 DB25 Or
11	J02 PIN 04	31		PIN-13 RX AUDIO IN -	PIN-13 DB25 W/BI
12	J02 PIN 03	6		PIN-13 RX AUDIO IN +	PIN-13 DB25 BI
13	J02 PIN 06	32		PIN-13 COR GROUND	PIN-13 DB25 W/Br
14	J02 PIN 05	7		PIN-13 COR INPUT	PIN-13 DB25 Br
15	J02 PIN 08	33		PIN-13 PTT GROUND	PIN-13 DB25 W/Gr
16	J02 PIN 07	8		PIN-13 PTT OUTPUT	PIN-13 DB25 Gr
17	J03 PIN 02	34		PC-5 TX AUDIO OUT -	PC-5 DB25 W/Or
18	J03 PIN 01	9		PC-5 TX AUDIO OUT +	PC-5 DB25 Or
19	J03 PIN 04	35		PC-5 RX AUDIO IN -	PC-5 DB25 W/BI
20	J03 PIN 03	10		PC-5 RX AUDIO IN +	PC-5 DB25 BI
21	J03 PIN 06	36		PC-5 COR GROUND	PC-5 DB25 W/Br
22	J03 PIN 05	11		PC-5 COR INPUT	PC-5 DB25 Br
23	J03 PIN 08	37		PC-5 PTT GROUND	PC-5 DB25 W/Gr
24	J03 PIN 07	12		PC-5 PTT OUTPUT	PC-5 DB25 Gr
25	J04 PIN 02	38		CPTCH-1 TX AUDIO OUT -	CPTCH-1 DB25 W/Or
26	J04 PIN 01	13		CPTCH-1 TX AUDIO OUT +	CPTCH-1 DB25 Or
27	J04 PIN 04	39		CPTCH-1 RX AUDIO IN -	CPTCH-1 DB25 W/BI
28	J04 PIN 03	14		CPTCH-1 RX AUDIO IN +	CPTCH-1 DB25 BI
29	J04 PIN 06	40		CPTCH-1 COR GROUND	CPTCH-1 DB25 Gr
30	J04 PIN 05	15		CPTCH-1 COR INPUT	CPTCH-1 DB25 Br
31	J04 PIN 08	41		CPTCH-1 PTT GROUND	
32	J04 PIN 07	16		CPTCH-1 PTT OUTPUT	
33	J05 PIN 02	42		CPTCH-2 TX AUDIO OUT -	CPTCH-2 DB25 W/Or
34	J05 PIN 01	17		CPTCH-2 TX AUDIO OUT +	CPTCH-2 DB25 Or
35	J05 PIN 04	43		CPTCH-2 RX AUDIO IN -	CPTCH-2 DB25 W/BI
36	J05 PIN 03	18		CPTCH-2 RX AUDIO IN +	CPTCH-2 DB25 BI
37	J05 PIN 06	44		CPTCH-2 COR GROUND	CPTCH-2 DB25 Gr
38	J05 PIN 05	19		CPTCH-2 COR INPUT	CPTCH-2 DB25 Br
39	J05 PIN 08	45		CPTCH-2 PTT GROUND	
40	J05 PIN 07	20		CPTCH-2 PTT OUTPUT	
41	J06 PIN 02	46		CPTCH-3 TX AUDIO OUT -	CPTCH-3 DB25 W/Or
42	J06 PIN 01	21		CPTCH-3 TX AUDIO OUT +	CPTCH-3 DB25 Or
43	J06 PIN 04	47		CPTCH-3 RX AUDIO IN -	CPTCH-3 DB25 W/BI
44	J06 PIN 03	22		CPTCH-3 RX AUDIO IN +	CPTCH-3 DB25 BI
45	J06 PIN 06	48		CPTCH-3 COR GROUND	CPTCH-3 DB25 Gr
46	J06 PIN 05	23		CPTCH-3 COR INPUT	CPTCH-3 DB25 Br
47	J06 PIN 08	49		CPTCH-3 PTT GROUND	
48	J06 PIN 07	24		CPTCH-3 PTT OUTPUT	
49		50			
50		25			

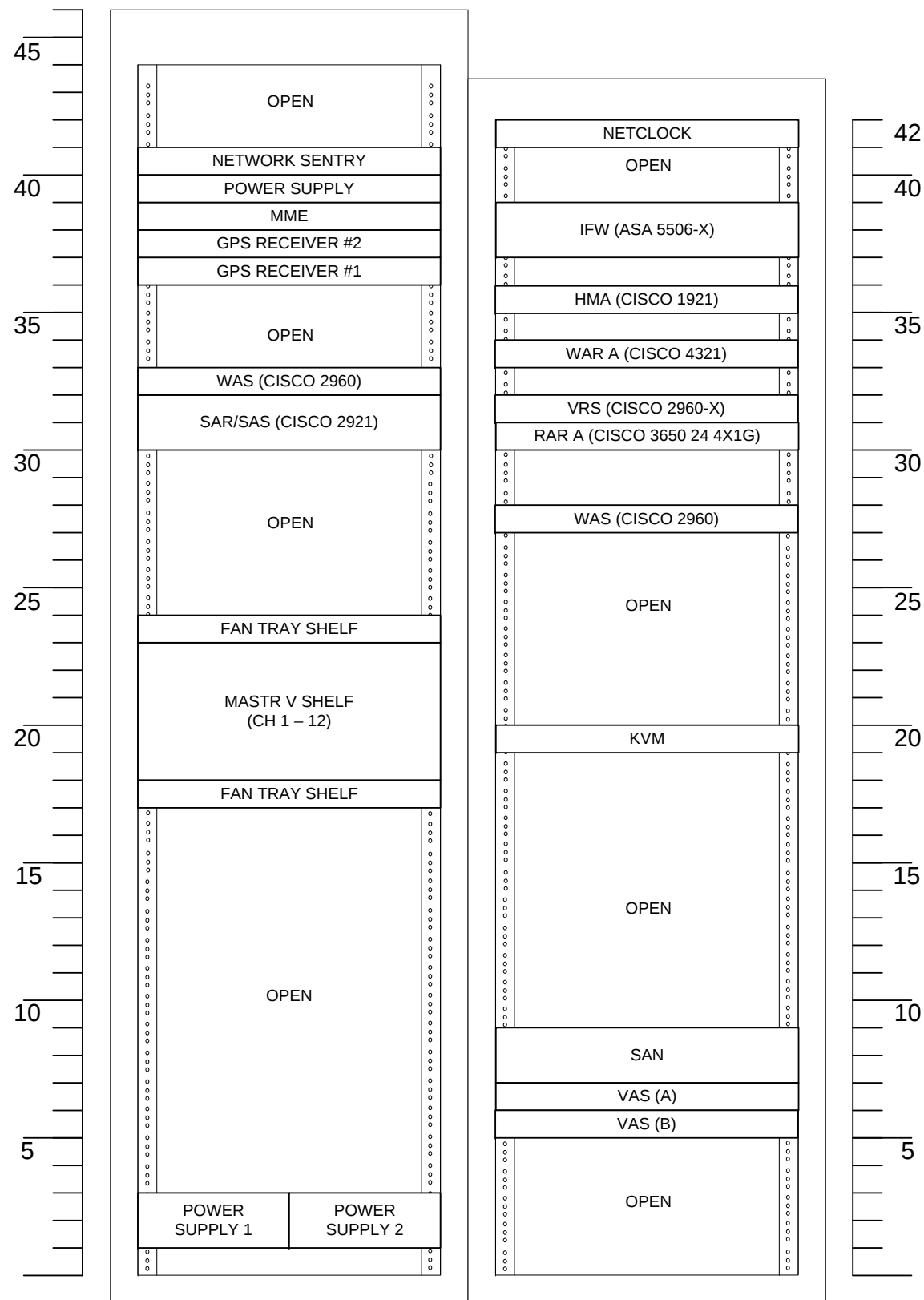
CITY OF CLEARWATER
MAIN SITE P25 SIMULCAST TX/RX SITE – DRAWING INDEX

DRAWING	DESCRIPTION
CLMAIN-10101	EQUIPMENT ROOM FLOORPLAN
CLMAIN-10102	RACK ELEVATIONS
CLMAIN-10103-1	NSC NETWORK CONNECTION DIAGRAMS
CLMAIN-10103-2	RF RACK NETWORK CONNECTION DIAGRAMS
CLMAIN-10107	ANTENNA SYSTEMS





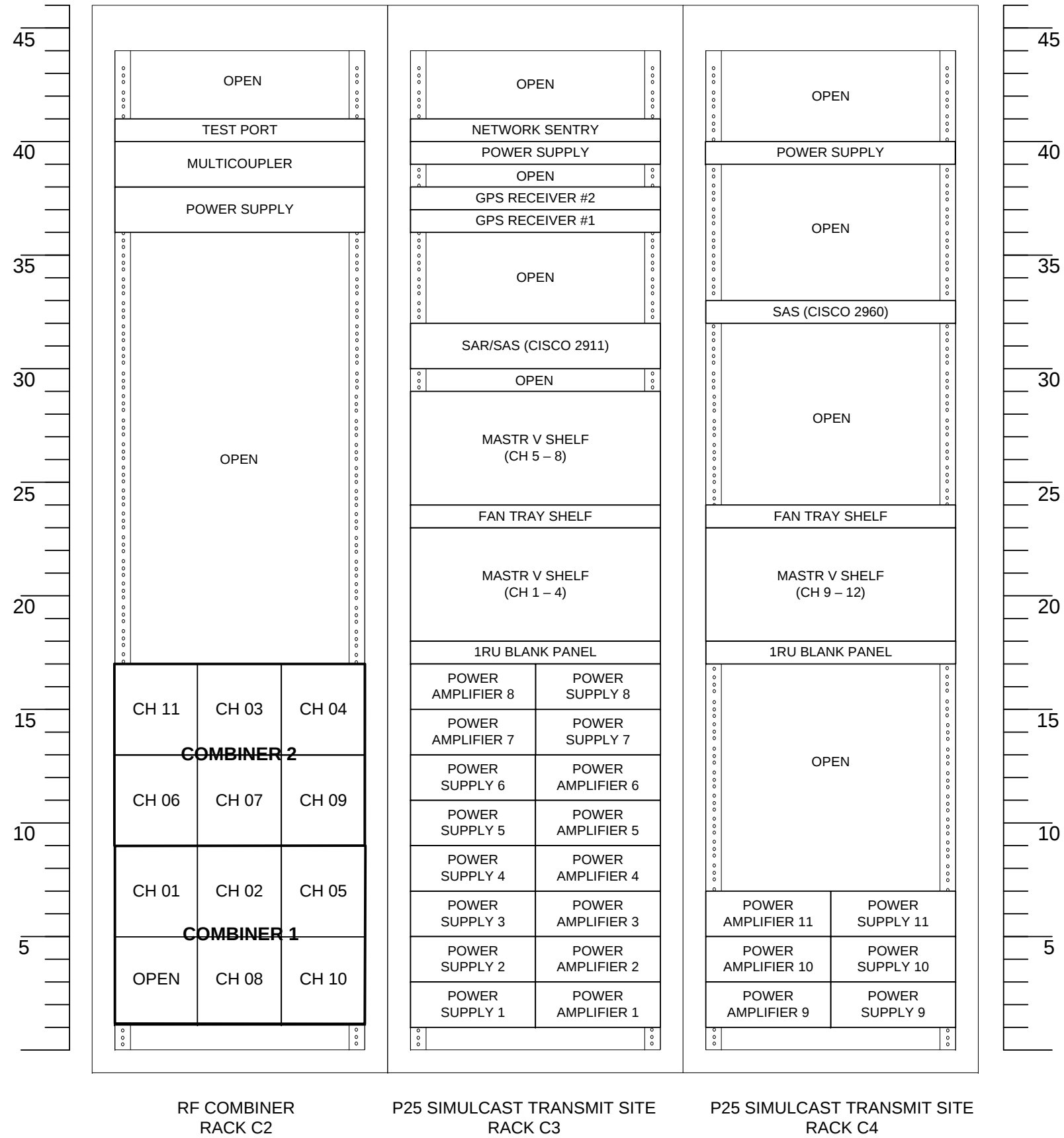
NSC
RACK D4

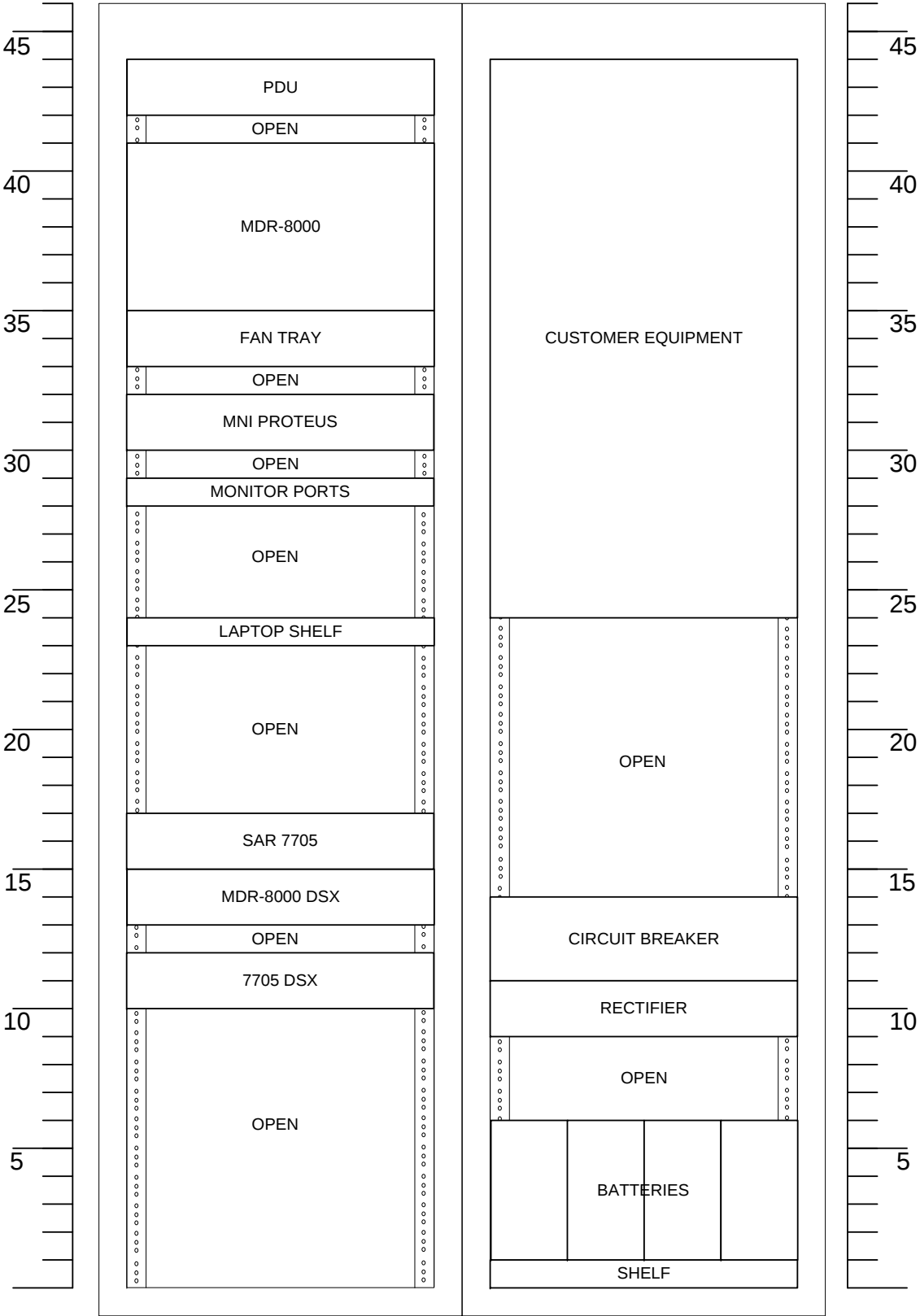


P25 SIMULCAST CONTROL POINT
RACK D3

NSC
RACK D4

 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		MAIN SITE	
		CONTROL POINT RACK ELEVATION	
PREPARED BY: Kasey Crow			
DATE: 10/23/2017			
DWG: CLMAIN-10102		REV G	SHEET 2 OF 4

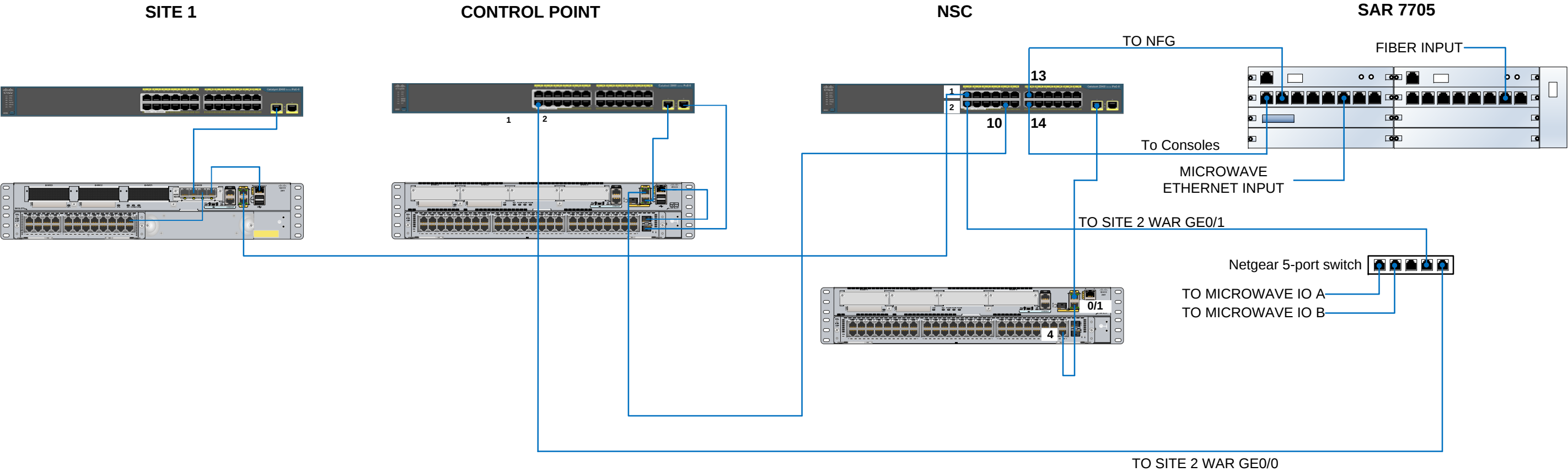


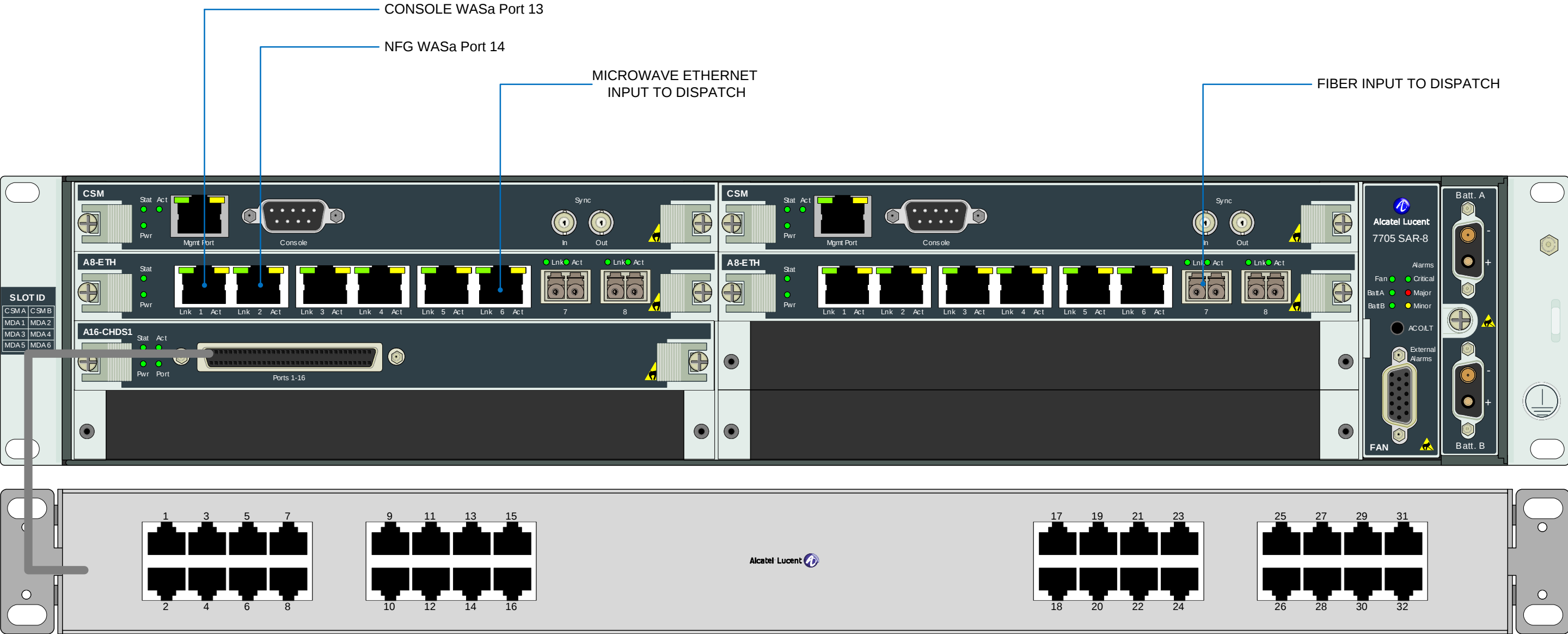


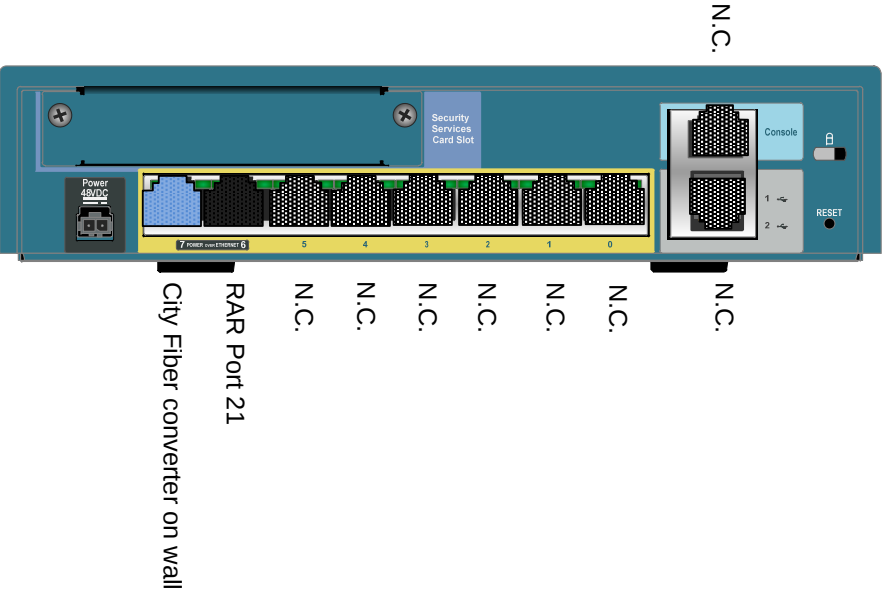
MICROWAVE RADIO

RECTIFIER AND CUSTOMER EQUIPMENT

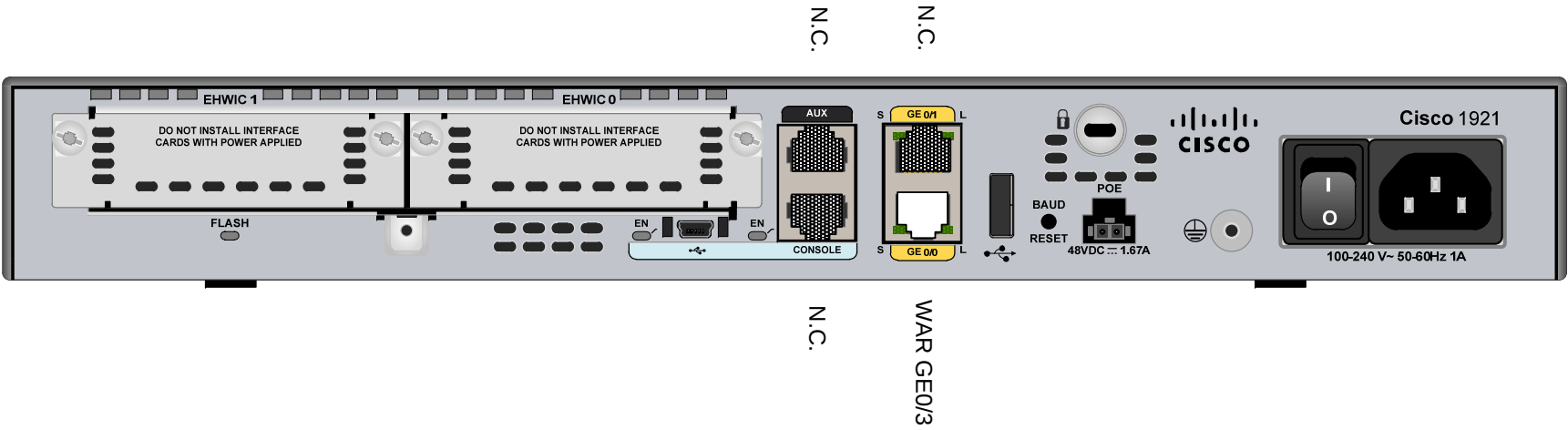
 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		MAIN SITE	
		MICROWAVE RACK ELEVATION	
PREPARED BY: Kasey Crow			
DATE: 10/23/2017			
DWG: CLMAIN-10102			
		REV G	SHEET 4 OF 4



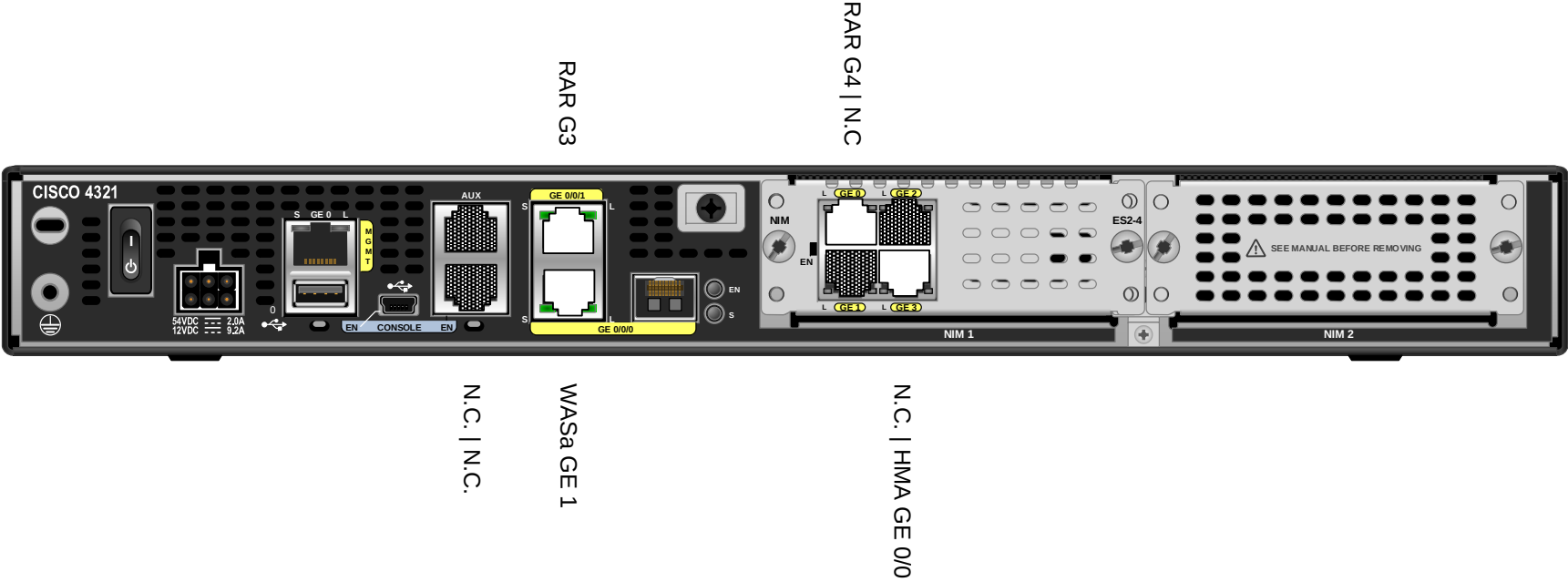




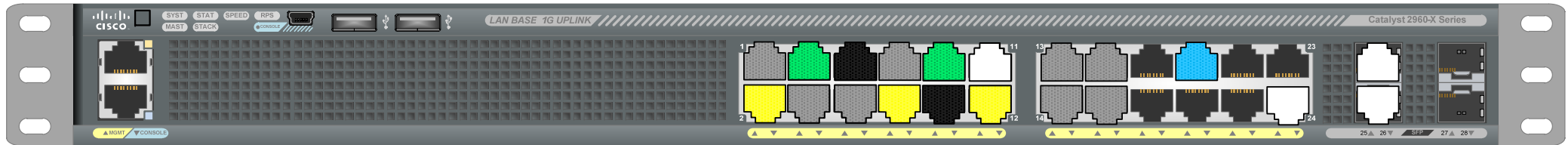
 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		MAIN SITE - NSC	
		CISCO ASA 5506-X IFW CONNECTION DIAGRAM	
PREPARED BY: Kasey Crow			
DATE: 10/23/2017			
DWG: CLMAIN-10103		REV G	SHEET 3 OF 11



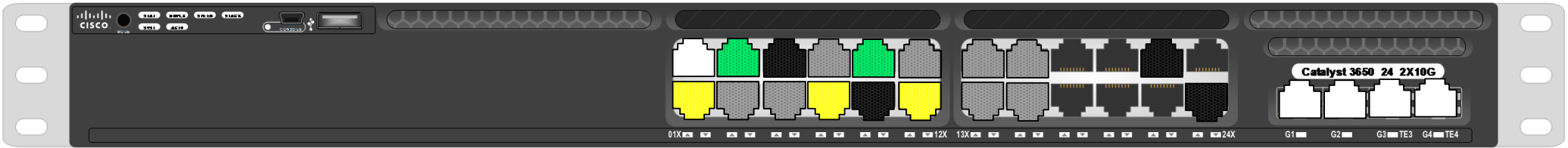
 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		MAIN SITE - NSC	
		CISCO 1921 HMA CONNECTION DIAGRAM	
PREPARED BY: A. Blankenship			
DATE: 10/23/2017			
DWG: CLMAIN-10103		REV G	SHEET 4 OF 11



Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		MAIN SITE - NSC	
		CISCO 4321 WAR CONNECTION DIAGRAM	
		DATE: 10/23/2017	
DWG: CLMAIN-10103		REV G	SHEET 5 OF 11

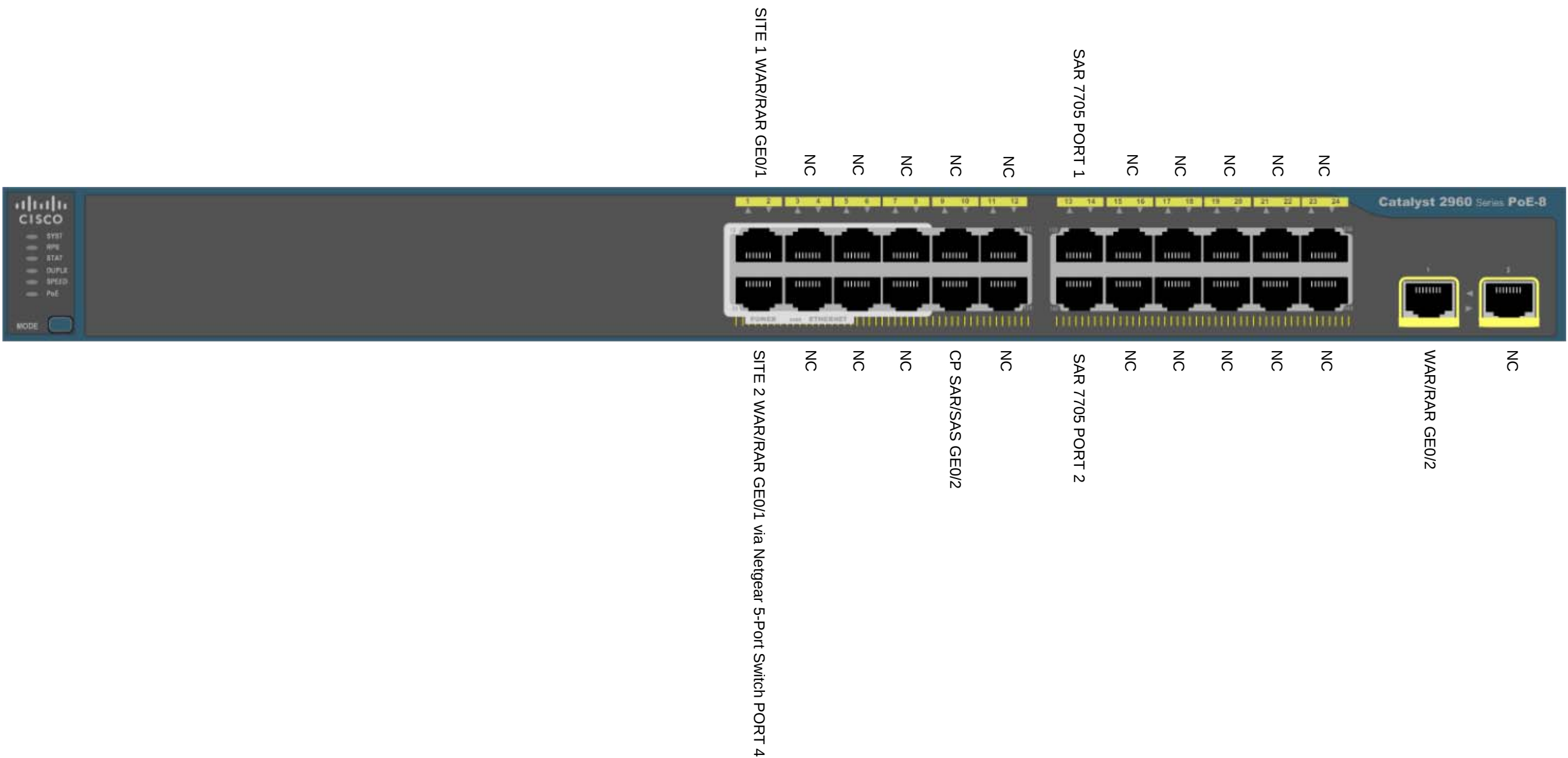


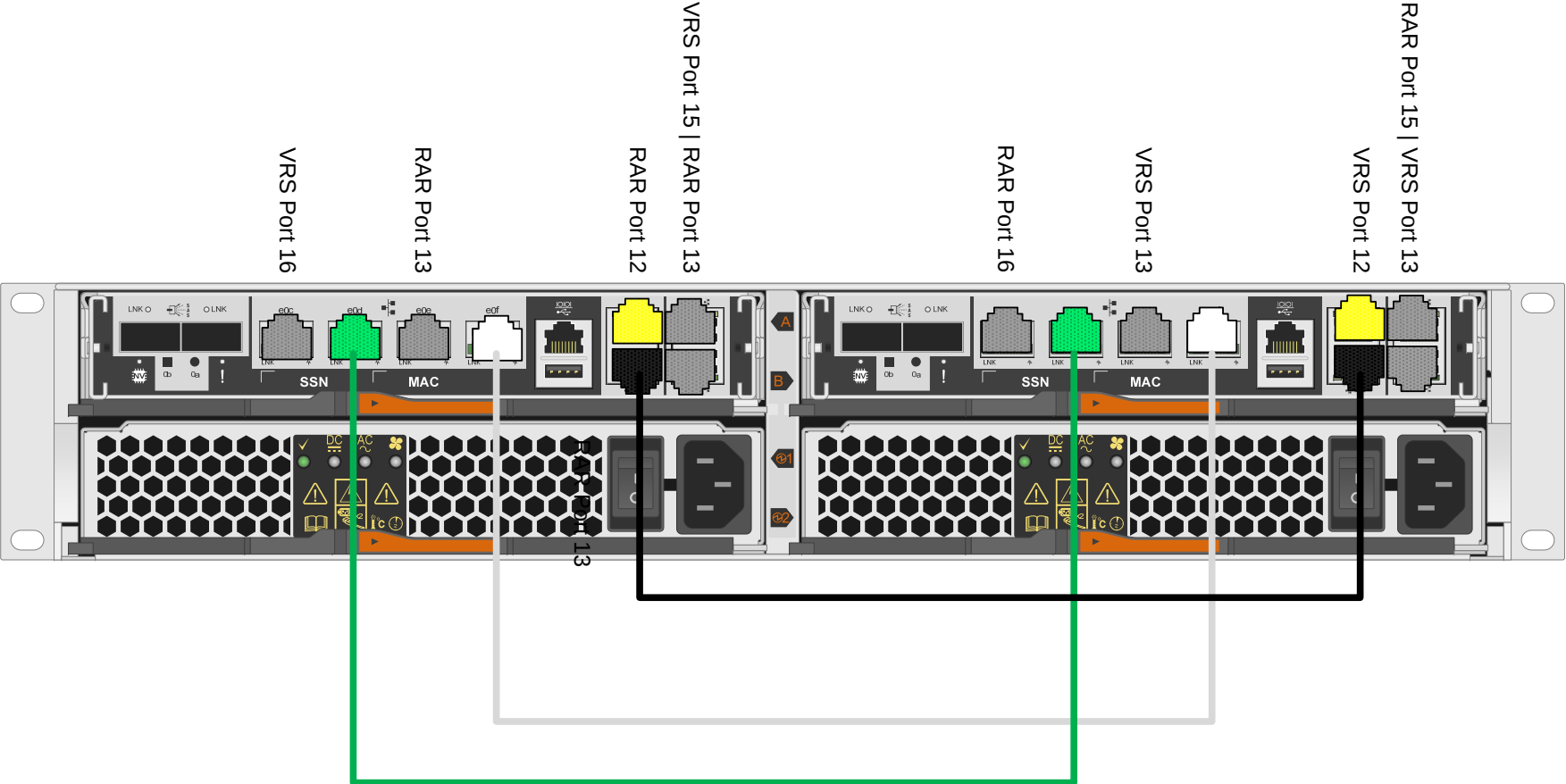
- N.C. | N.C.
- RAR G1 | RAR G2
- N.C. | Tech Port
- N.C. | N.C.
- Netclock | N.C.
- N.C | N.C
- SAN A e0c | SAN A e0a
- SAN B e0e | SAN B e0b
- VASb M | SAN B Maint
- VASa Extra-4 | VASa Port 1
- VASa Extra 2 | VASa Extra 3
- VASb Extra 5 | VASa Extra 1
- VASb Extra 7 | VASb Extra 6
- VASb Port 2 | VASb Extra 8

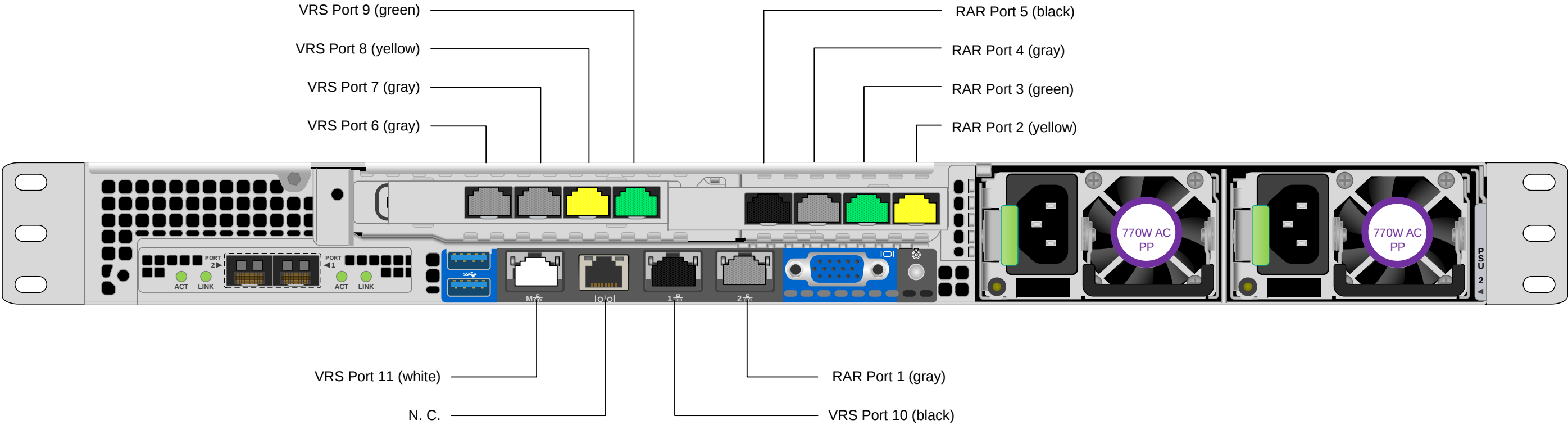


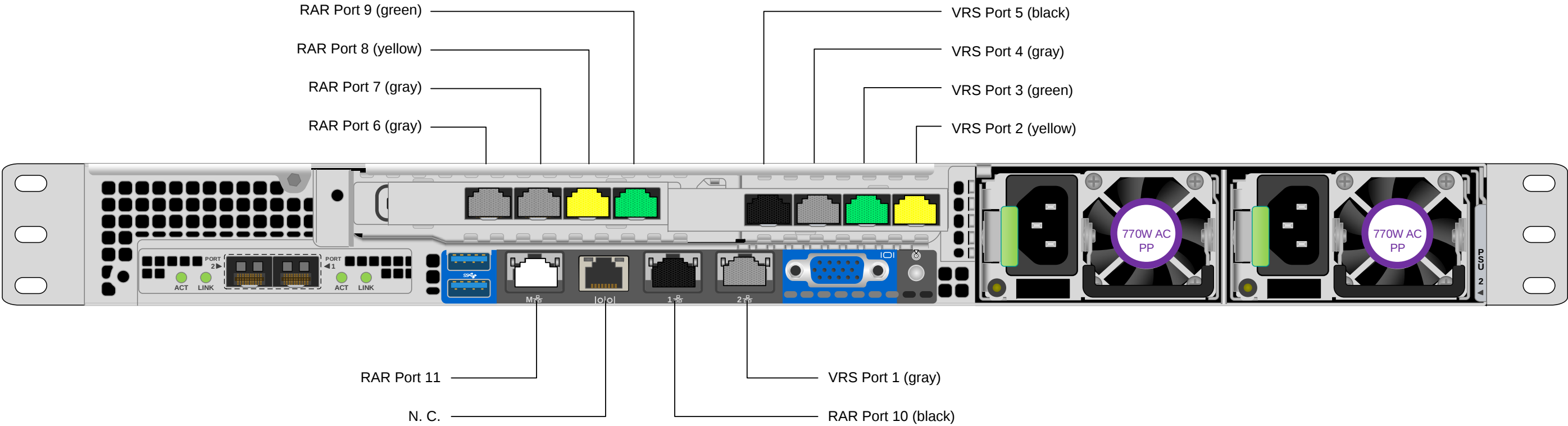
WAR NIM GE 0/0
WAR GE 0/0/1
VRS Port 26
VRS Port 25
N.C. | Tech Port
IFW Port 2 | N.C.
N.C | N.C
N.C | N.C
SAN B e0c | SAN B e0a
SAN A e0e | SAN A e0b
VAsa M | SAN A Maint
VAsb Extra-4 | VAsb Port 1
VAsb Extra 2 | VAsb Extra 3
VAsa Extra 5 | VAsb Extra 1
VAsa Extra 7 | VAsa Extra 6
VAsa Port 2 | VAsa Extra 8

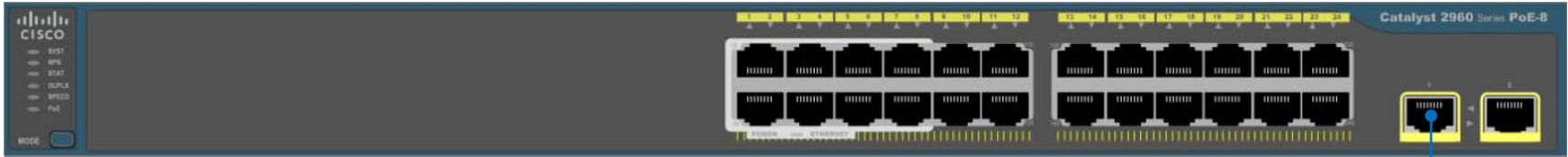
Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		MAIN SITE - NSC	
		CISCO 3650 RAR CONNECTION DIAGRAM	
PREPARED BY: Kasey Crow			
DATE: 10/23/2017			
DWG: CLMAIN-10103		REV G	SHEET 7 OF 11



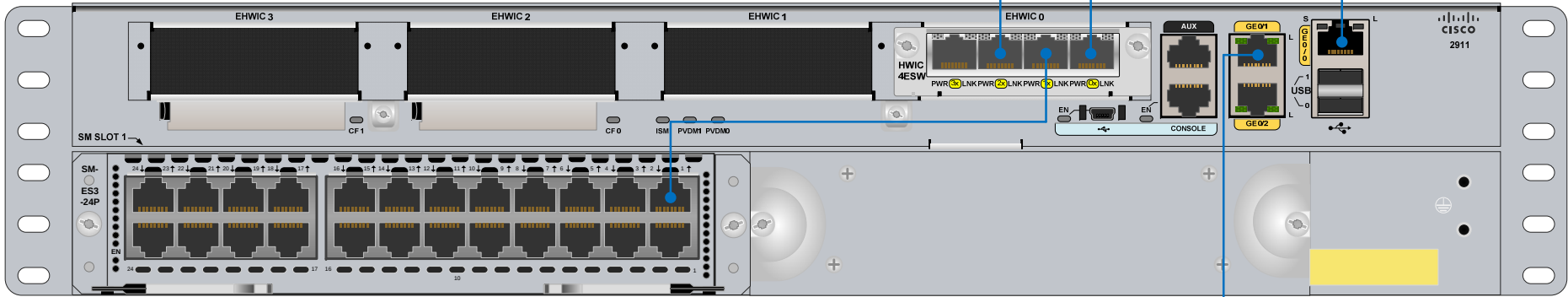






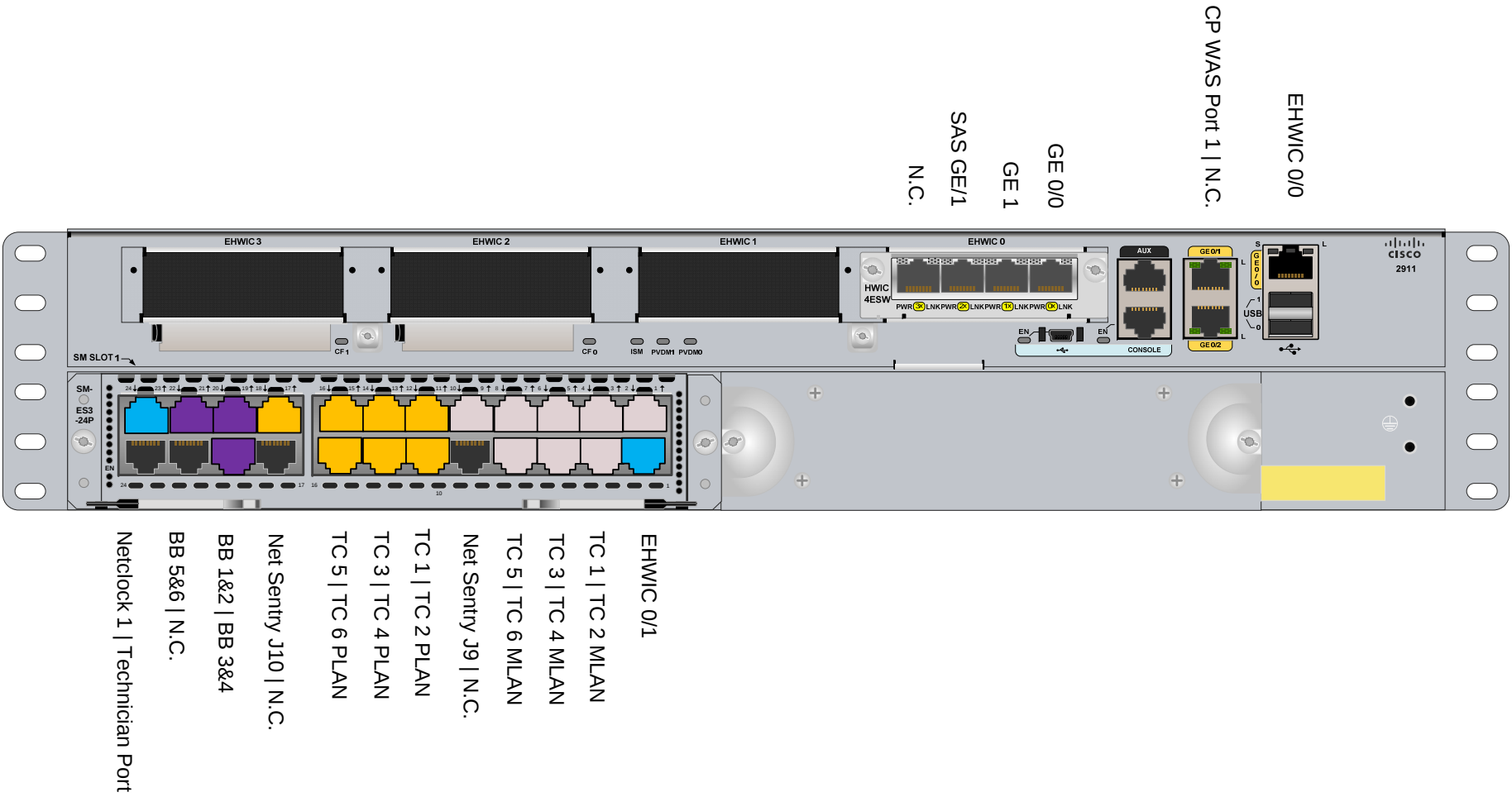


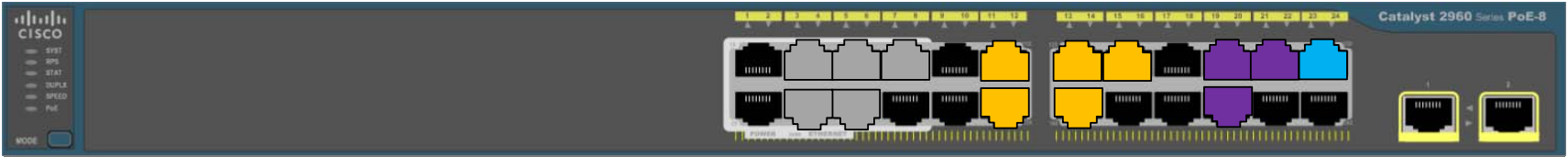
2960 SAS



2911 RAR/SAS

TO Control Point WAS Port 1





RAR EHWIC PT 2

Netclock 1 | Technician Port

BB 11 | N.C.

BB 7&8 | BB 9&10

TC 11 | N.C. PLAN

TC 9 | TC 10 PLAN

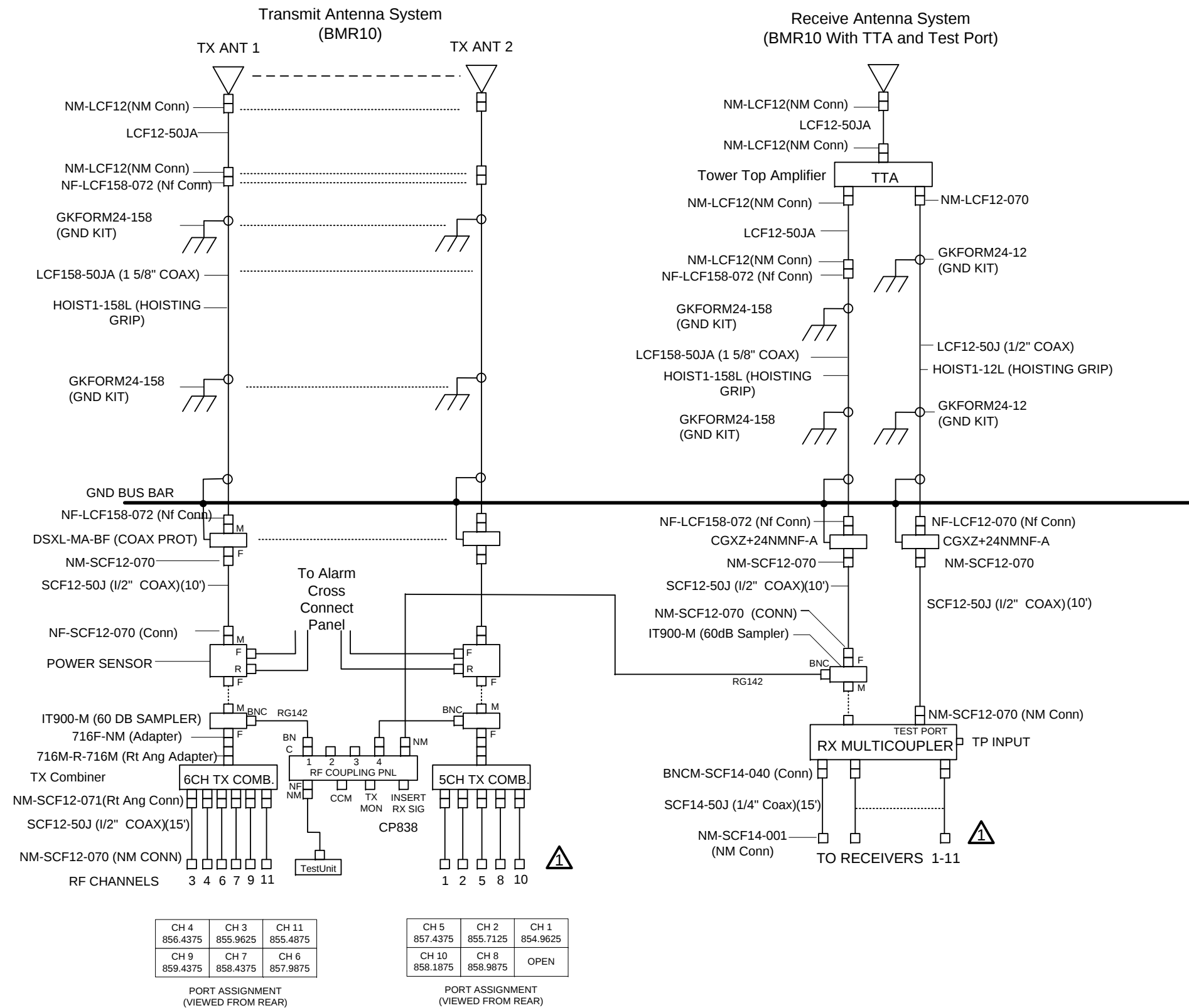
TC 7 | TC 8 PLAN

TC 11 | N.C. MLAN

TC 9 | TC 10 MLAN

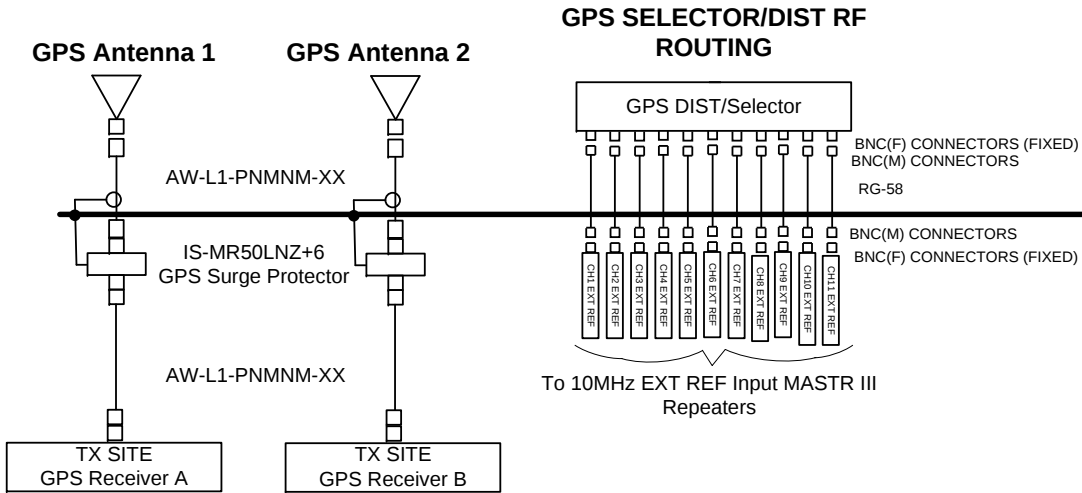
TC 7 | TC 8 MLAN

Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		MAIN SITE	
		CISCO 2960 / SAS2 CONNECTION DIAGRAM	
PREPARED BY: Kasey Crow			
DATE: 10/23/2017			
DWG: CLMAIN-10103-2		REV G	SHEET 3 OF 3

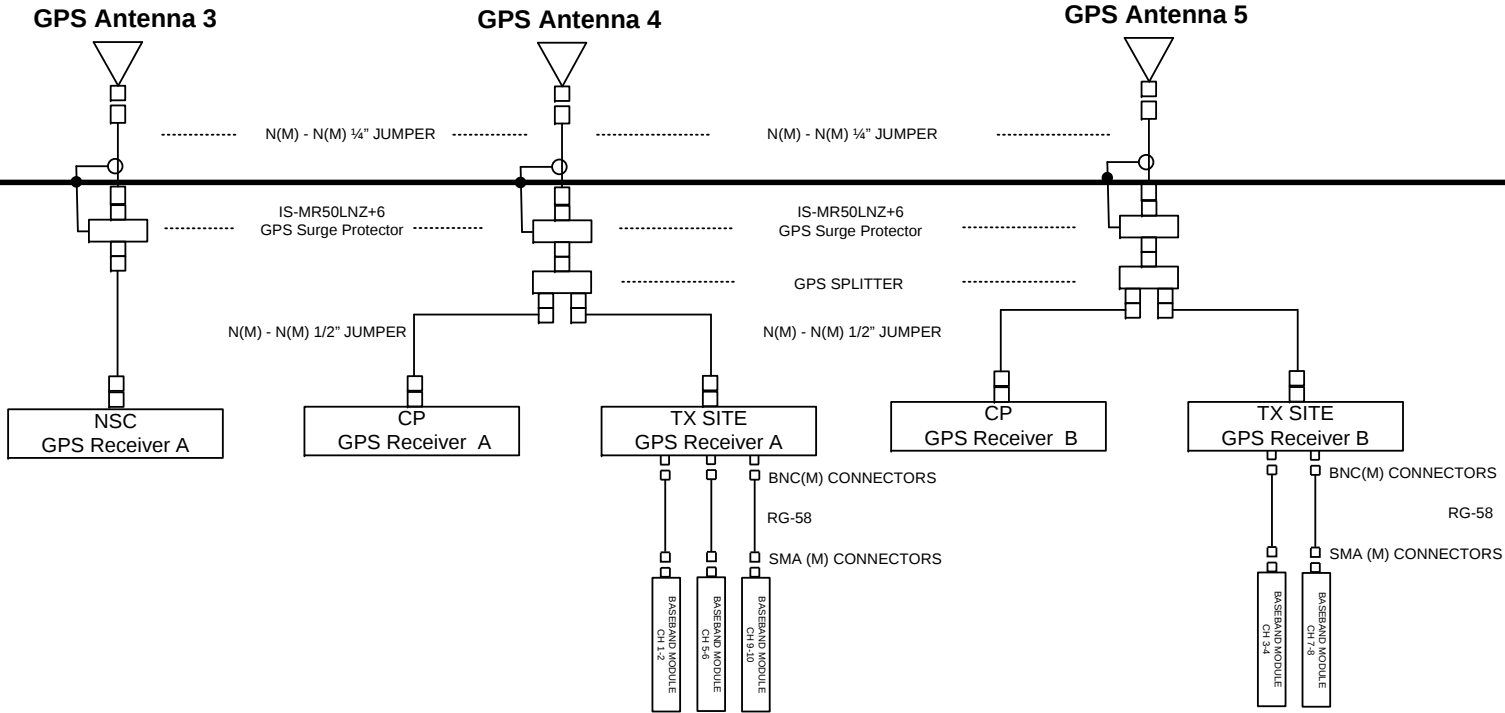


CHANNELS 1-6 USED BY P25 SIMULCAST SYSTEM

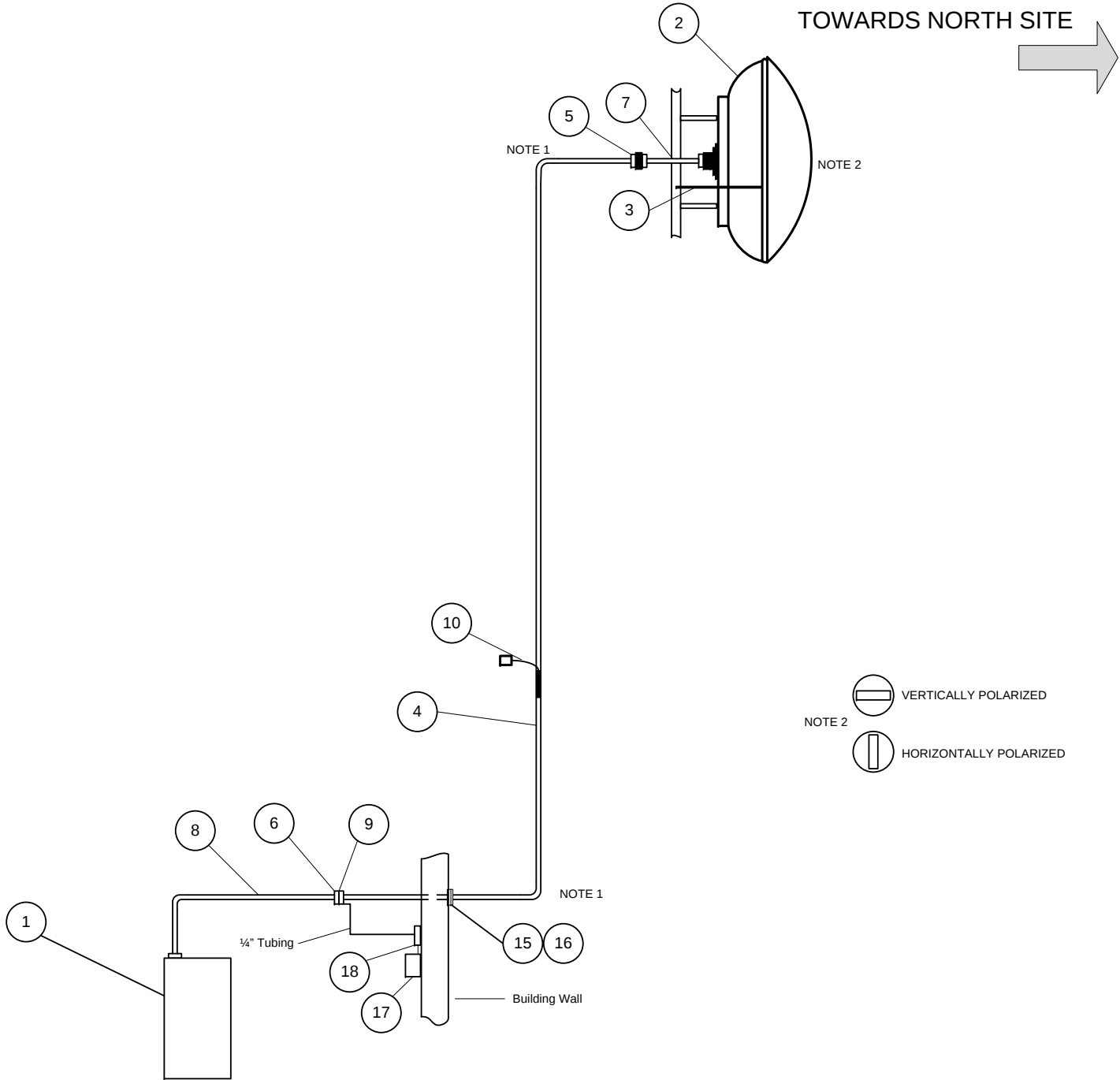
EDACS SIMULCAST GPS RECEIVERS



P25 SIMULCAST GPS RECEIVERS

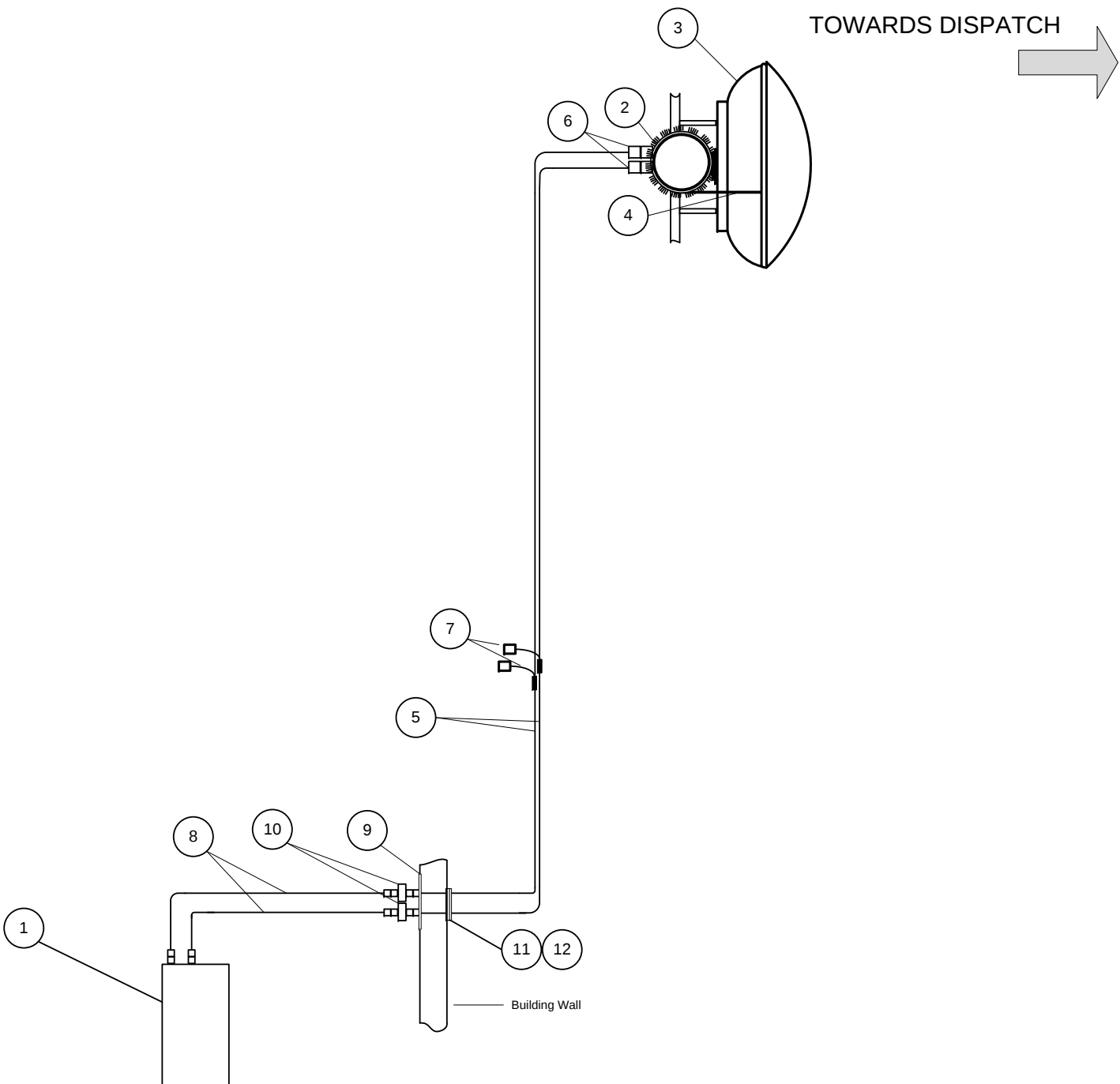


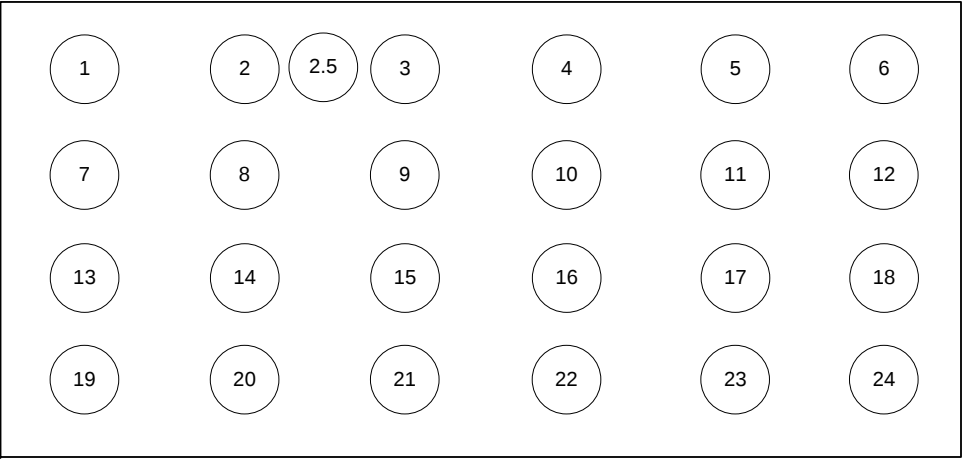
				MAIN TO			
				NORTH			
ITEM	H-F ITEM NO.	VENDOR	DESCRIPTION				
1	1.01	ALCATEL	MDR-8706E-50-29-HS, 6GHz 50MB Ethernet MHSB	1			
2		RFS	PAD6-65BC1S1R, 6' Dish w/Radome	1			
3			38891A SIDE STRUTS	1			
4		EUPEN	EWP63 ELLIPTICAL WAVEGUIDE	80			
5		EUPEN	EU63PCPR137G, Waveguide Connector TOP	1			
6		EUPEN	EU63PCPR137G, Waveguide Connector BOTTOM	1			
7		EUPEN	TF137-CC1-036Lm Flex Twist Waveguide	1			
8		EUPEN	TF137-CC1-036Lm Flex Twist Waveguide	1			
9		EUPEN	CBW-PW-G137, Pressure Window	1			
10		EUPEN	GK-S63, Grounding Kit	3			
11		EUPEN	HG-64, Hoisting Grip	3			
12			42396A-7 WAVEGUIDE HANGER KIT	15			
13			31768A ANGLE ADAPTOR KIT	1			
14			31771-4 THREADED ROD SUPPORT	1			
15			48950-1 WALL FEED THRU PLATE, SINGLE OPENING	1			
16			48939-63 5-INCH BOOT	1			
17		COMMSCOPE	MR050-81037, Dehydrator	1			
18		RFS	GDM-2, 2 Port Manifold	1			
TRANSMIT FREQUENCY / POLARIZATION				6795H			
AZIMUTH				40.2			
AGL ELEVATION				65			



- NOTES
1. MINIMUM BEND RADIUS OF WAVEGUIDE (IN INCHES)
- | | |
|---------|--------------|
| | EWP63 (6GHZ) |
| E-PLANE | 7 |
| H-PLANE | 20 |
2. OBSERVE FEEHORN POLARIZATION. INSTALL WITH POLARIZATION AS NOTED IN CHART.
3. INSTALL DISH ORIENTED TO THE BEARING INDICATED IN THE CHART.

ITEM	H-F ITEM NO.	VENDOR	DESCRIPTION	MAIN TO			
				DISPATCH			
1	1.01	MNI	PROTEUS MX, 11GHz 50MB Ethernet MHSB	1			
2		MNI	ODU	2			
3		COMMSCOPE	VHLP800-11-6WH, 3' Dish w/Radome	1			
4			38891A SIDE STRUTS	1			
5		EUPEN	EC4-50 1/2" Hardline	1			
6		EUPEN	NM50V12 1/2" N Male Connector	6			
7		EUPEN	GKC12 Ground Kit	1			
8		TIMES	LMR-400 1/2" Coaxial Cable	1			
9		Polyphaser	Port Entry Panel and Ground System	1			
10		Polyphaser	Surge Suppressor	2			
11			48950-1 WALL FEED THRU PLATE, SINGLE OPENING	1			
12			48939-63 5-INCH BOOT	1			
			TRANSMIT FREQUENCY / POLARIZATION	11345V			
			AZIMUTH	332.84			
			AGL ELEVATION	128			





COAX ENTRY PORT
(VIEWED FROM INSIDE)

- 1. P25 CP GPS B, P25 TX SITE GPS B.
- 2. P25 CP GPS A, P25 TX SITE GPS A.
- 2.5 MICROWAVE TO NORTH SITE.
- 3. MNI MICROWAVE A SIDE.
- 4. MNI MICROWAVE B SIDE.
- 5. EDACS ALIGNMENT RADIO.
- 6. EDACS GPS X 2.
- 7. CLEARWATER RX, 800MHz BMR 10 O @ 300', 7/8" HELIAX, ONE GREEN STRIPE.
- 8. NOT USED
- 9. CLEARWATER TX 2, 800MHz BMR 10 O @ 300', 1 5/8" HELIAX, ONE BLUE STRIPE.
- 10. CLEARWATER TX 1, 800MHz BMR 10 O @ 300', 1 5/8" HELIAX, ONE RED STRIPE.
- 11. NOT USED.
- 12. OPEN.
- 13. P25 NSC GPS.
- 14. NOT USED.
- 15. OPEN.
- 16. NOT USED.
- 17. VHF.
- 18. NOT USED.
- 19. CITY P2P FS48.
- 20. CITY P2P WPC.
- 21. CITY P2P DEL ORO H20.
- 22. CITY P2P KINGS HWY H20.
- 23. PCSO.
- 24. OPEN.

CITY OF CLEARWATER

NORTH SITE P25 SIMULCAST TX/RX SITE – DRAWING INDEX

DRAWING

CLNORTH-10201

CLNORTH-10202

CLNORTH-10203

CLNORTH-10207

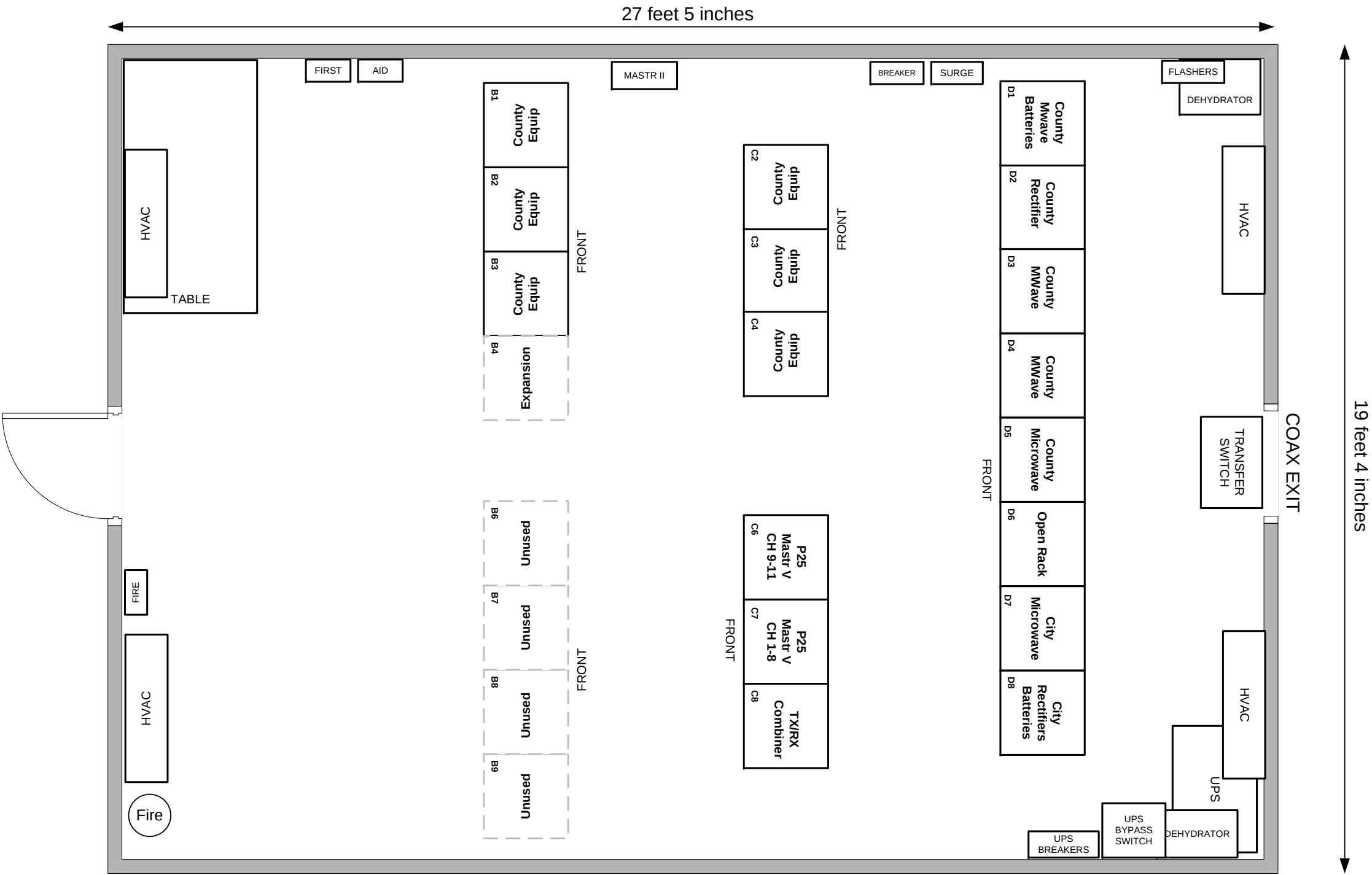
DESCRIPTION

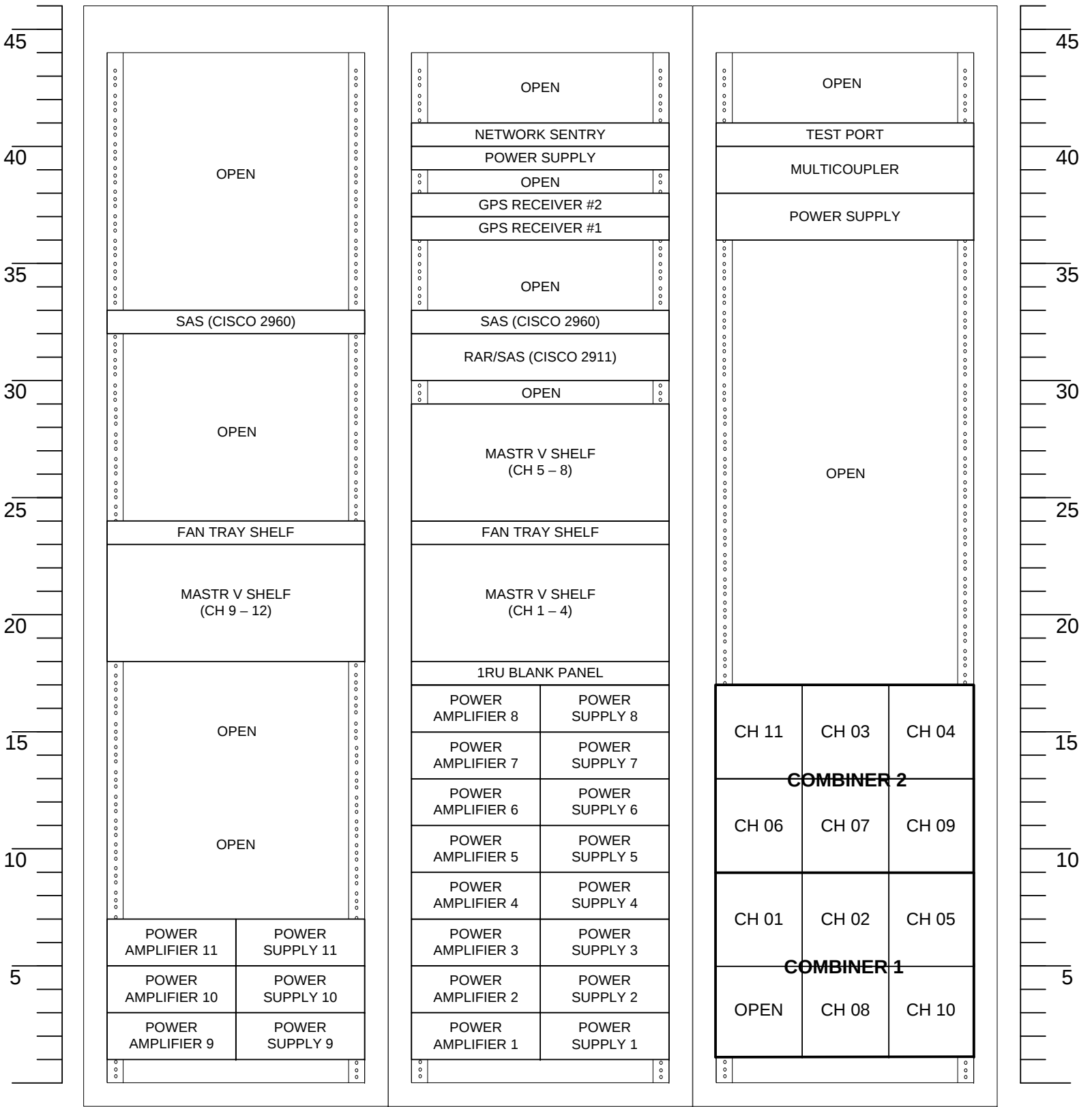
EQUIPMENT ROOM FLOORPLAN

RACK ELEVATIONS

RF RACK NETWORK CONNECTION DIAGRAMS

ANTENNA SYSTEMS

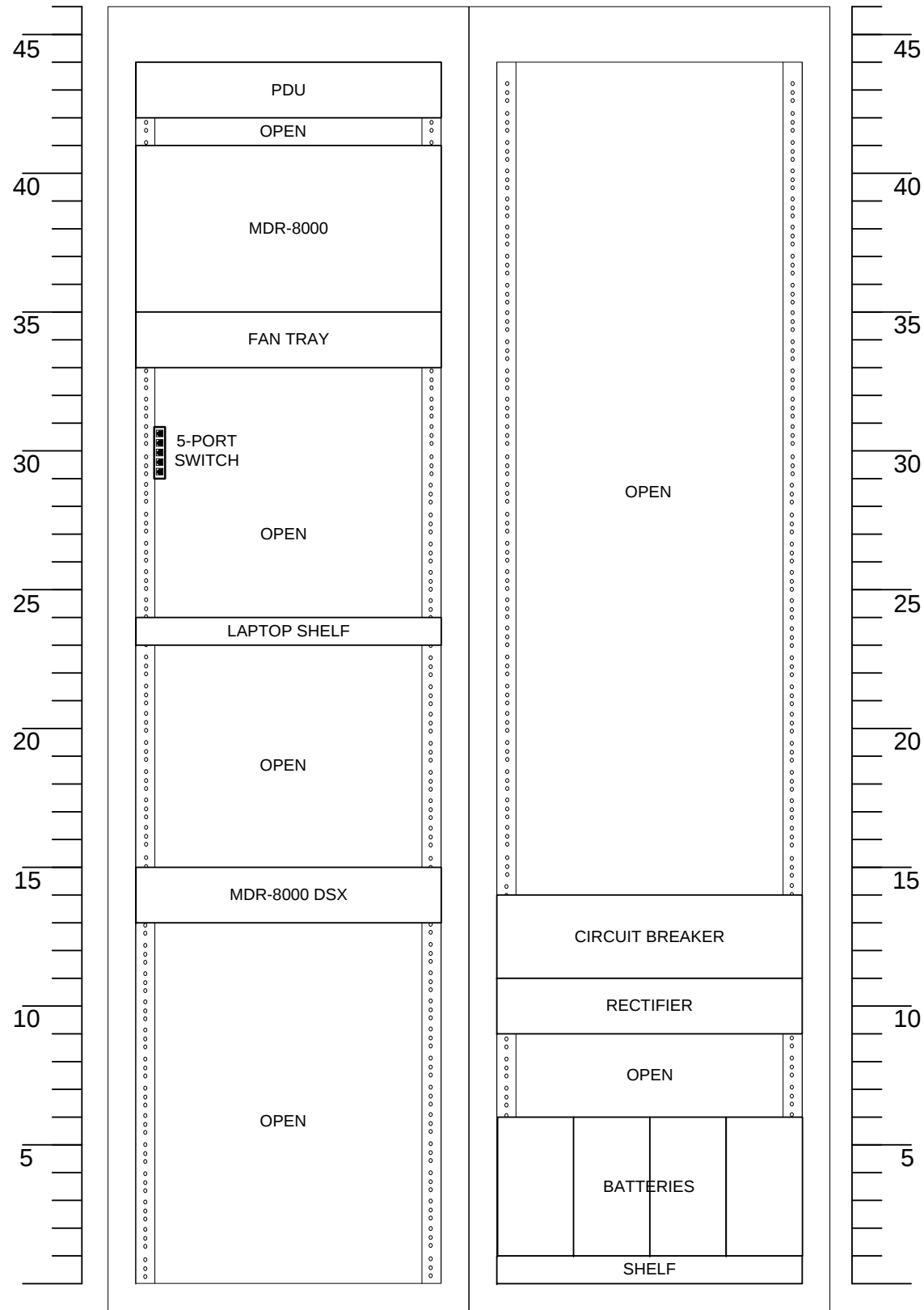




P25 SIMULCAST TRANSMIT SITE
RACK C6

P25 SIMULCAST TRANSMIT SITE
RACK C7

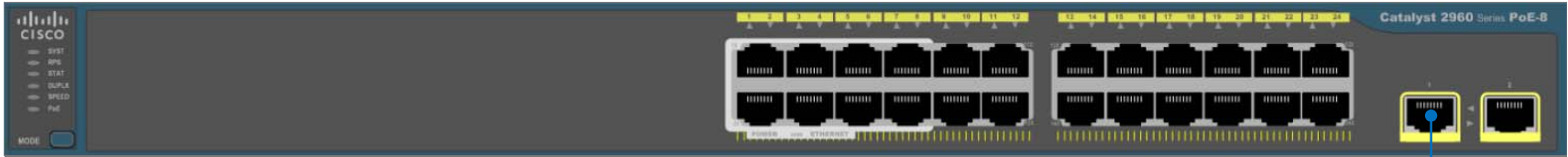
RF COMBINER
RACK C8



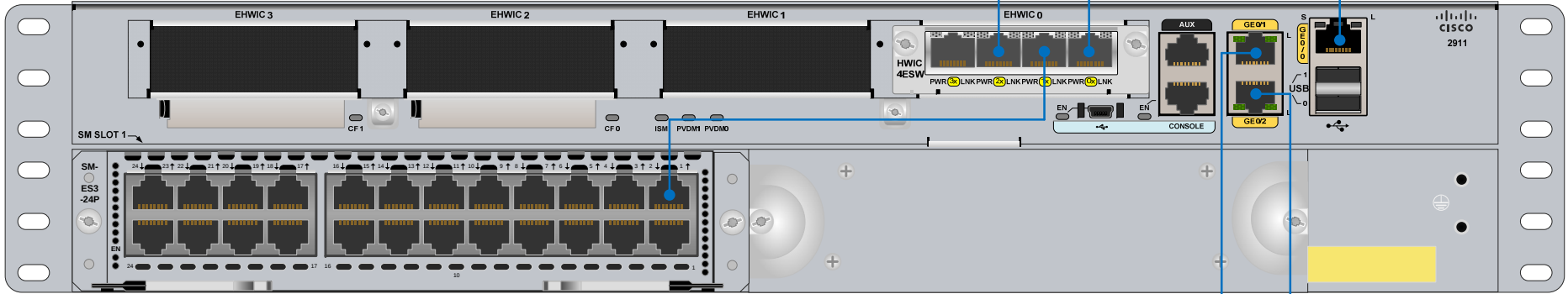
MICROWAVE RADIO

RECTIFIER AND CUSTOMER EQUIPMENT

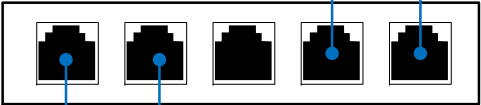
 Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		NORTH SITE	
		MICROWAVE RACK ELEVATION	
PREPARED BY: Kasey Crow			
DATE: 4/18/2017			
DWG: CLNORTH-10202			
		REV G	SHEET 2 OF 2



2960 SAS



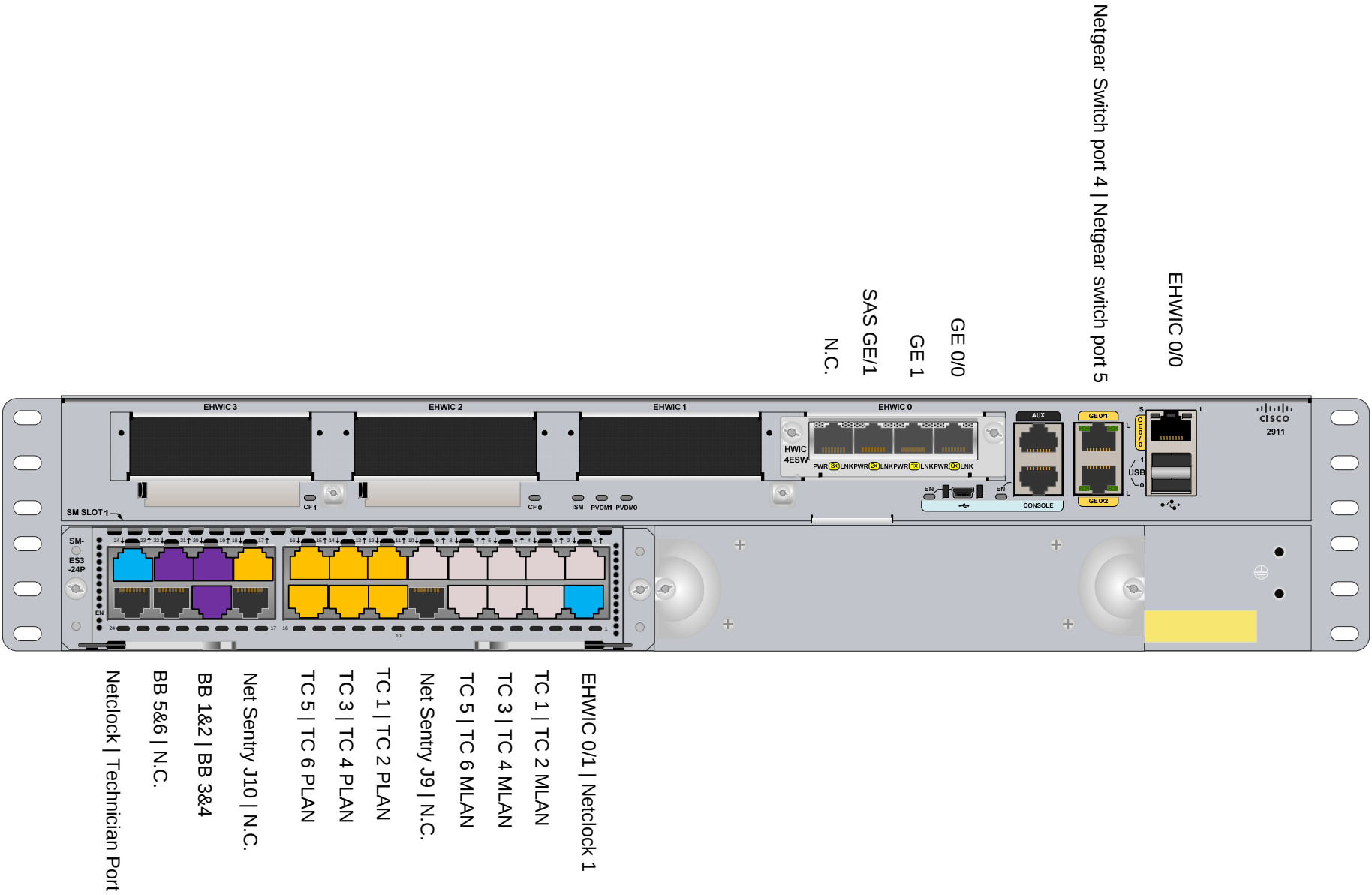
2911 RAR/SAS

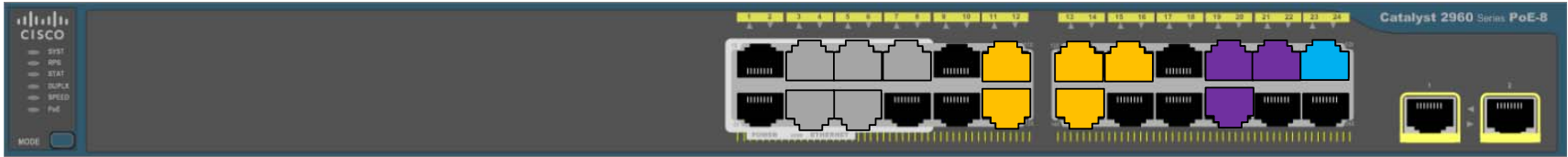


Netgear 5-port switch

TO MICROWAVE IO A

TO MICROWAVE IO B





RAR EHW/C PT 2

Netclock 1 | Technician Port

BB 11 | N.C.

BB 7&8 | BB 9&10

TC 11 | N.C. PLAN

TC 9 | TC 10 PLAN

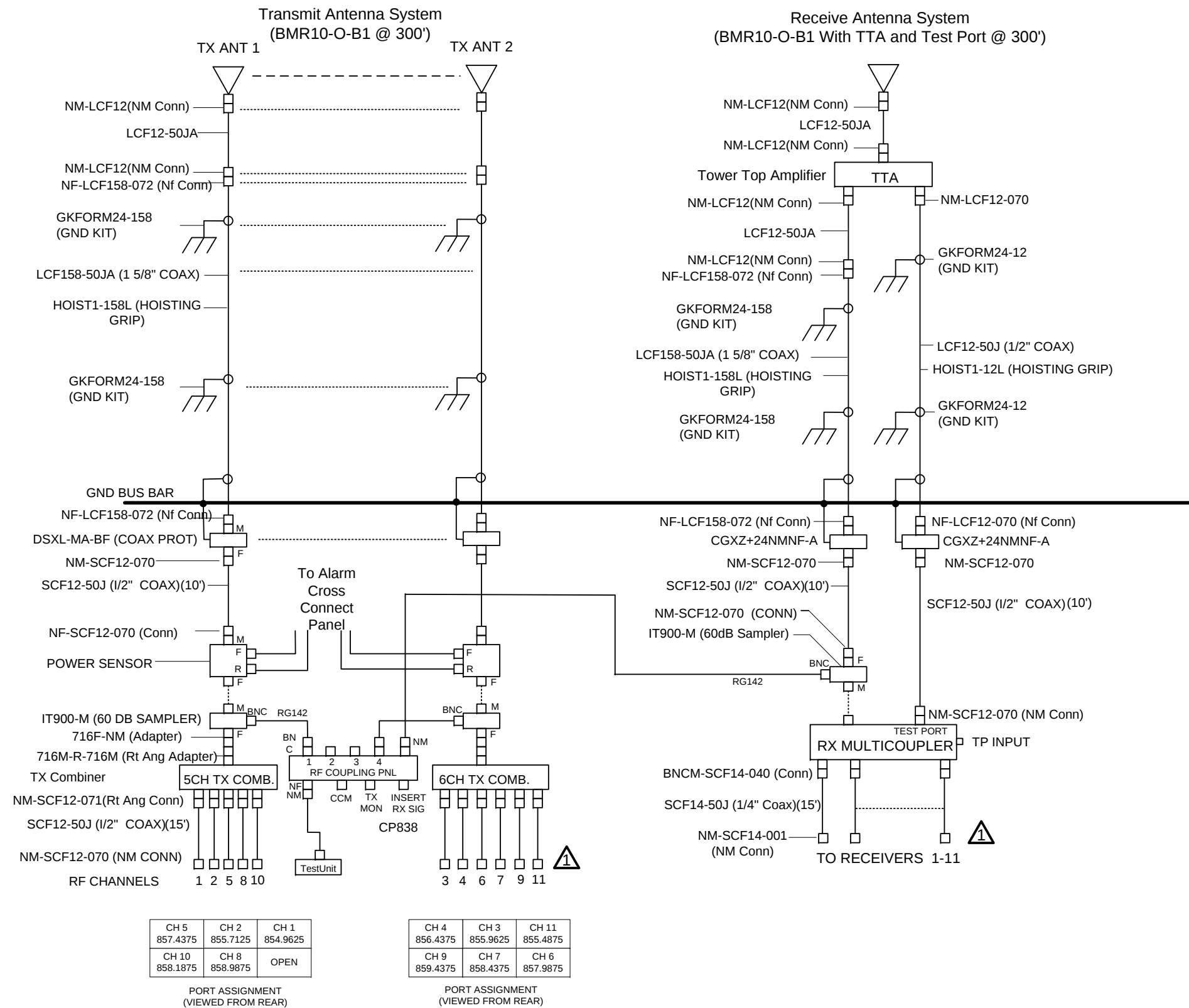
TC 7 | TC 8 PLAN

TC 11 | N.C. MLAN

TC 9 | TC 10 MLAN

TC 7 | TC 8 MLAN

Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYSTEMS		NORTH SITE	
		CISCO 2960 SAS 2 CONNECTION DIAGRAM	
PREPARED BY: Kasey Crow			
DATE: 10/25/2017			
DWG: CLNORTH-10203		REV G	SHEET 3 OF 3



⚠ CHANNELS 1-6 USED BY P25 SIMULCAST SYSTEM

EDACS SIMULCAST GPS RECEIVERS

The diagram illustrates the signal path for two GPS receivers, A and B, connected to a central routing unit. Each receiver path starts with a GPS antenna (Antenna 1 and Antenna 2) connected to a TX SITE GPS Receiver (A and B). The signals pass through an IS-MR50LNZ+6 GPS Surge Protector and an AW-L1-PNMNM-XX component. The outputs of both receivers are connected to a central GPS DIST/Selector unit. This unit has multiple BNC(M) connectors for the receivers and BNC(F) connectors for fixed connections. The routing unit is connected to a BNC(M) connector and a BNC(F) connector (FIXED) via an RG-58 cable. The routing unit also has a 10MHz EXT REF input connected to MASTR III Repeaters.

GPS Antenna 1 **GPS Antenna 2**

TX SITE GPS Receiver A **TX SITE GPS Receiver B**

GPS DIST/Selector

BNC(F) CONNECTORS (FIXED)
BNC(M) CONNECTORS
RG-58

AW-L1-PNMNM-XX

IS-MR50LNZ+6 GPS Surge Protector

To 10MHz EXT REF Input MASTR III Repeaters

P25 SIMULCAST GPS RECEIVERS

The diagram illustrates the setup for two P25 simulcast GPS receivers, labeled GPS Antenna 3 and GPS Antenna 4. Each antenna is connected to a TX SITE (GPS Receiver A and GPS Receiver B respectively) via a series of components: a BNC(M) connector, an IS-MR50LNZ+6 GPS Surge Protector, and an N(M) - N(M) 1/2" JUMPER. The receivers are connected to three BASEBAND MODULES (CH 1.2, CH 5.6, CH 9.0) via RG-58 cables and SMA (M) CONNECTORS.

GPS Antenna 3

GPS Antenna 4

TX SITE GPS Receiver A

TX SITE GPS Receiver B

BNC(M) CONNECTORS

IS-MR50LNZ+6 GPS Surge Protector

N(M) - N(M) 1/2" JUMPER

RG-58

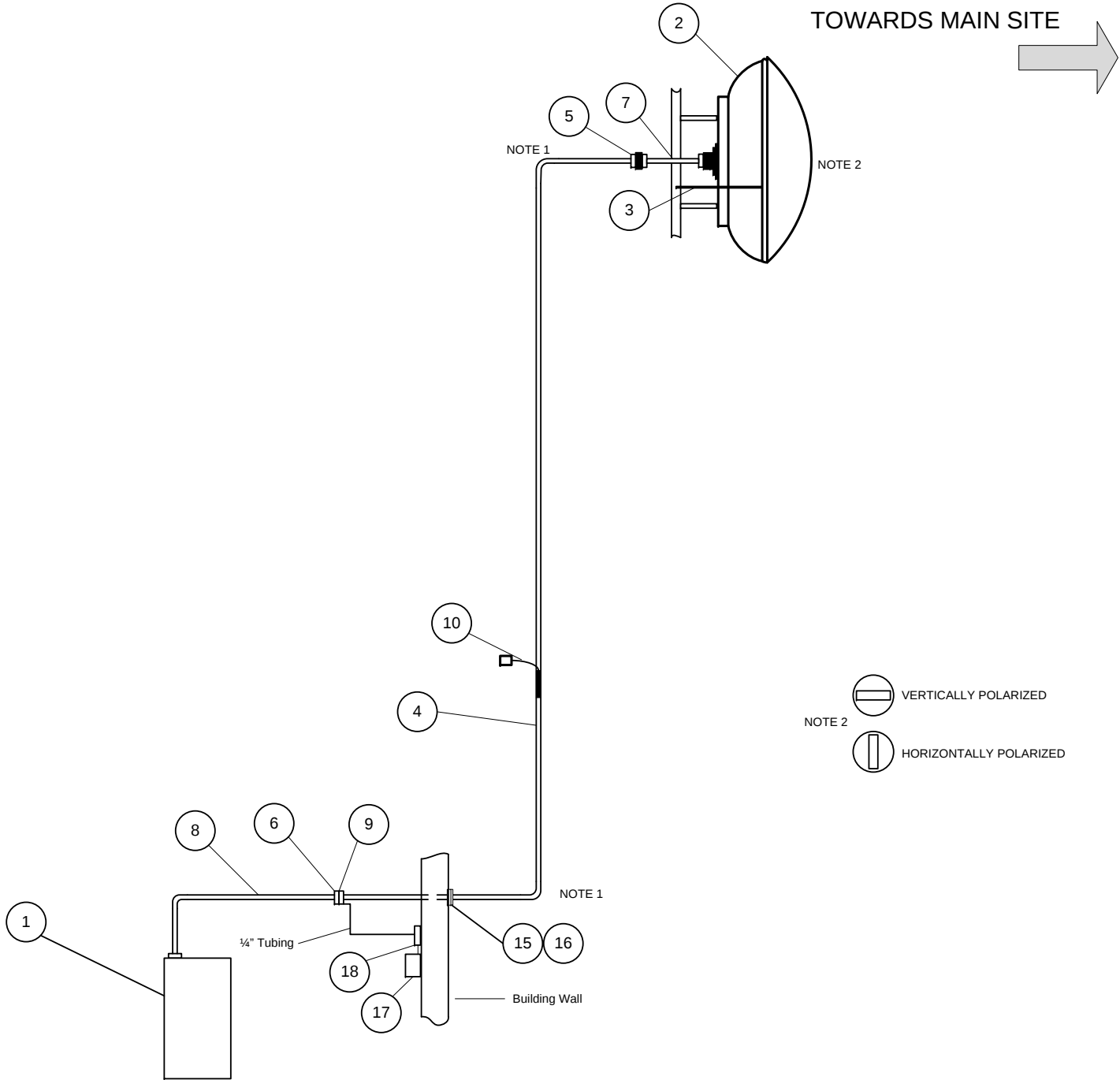
SMA (M) CONNECTORS

BASEBAND MODULE CH 1.2

BASEBAND MODULE CH 5.6

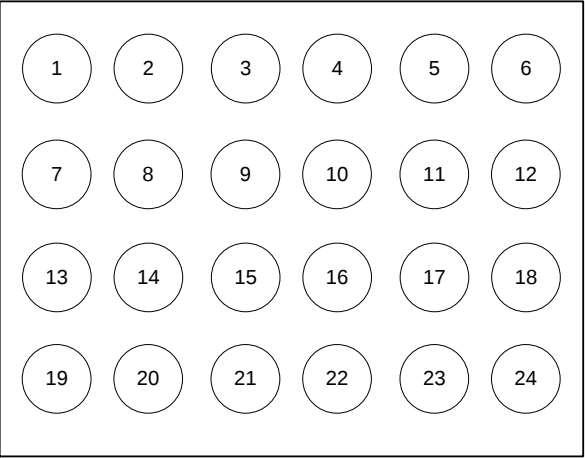
BASEBAND MODULE CH 9.0

				NORTH TO			
				MAIN			
ITEM	H-F ITEM NO.	VENDOR	DESCRIPTION				
1	1.01	ALCATEL	MDR-8706E-50-29-HS, 6GHz 50MB Ethernet MHSB	1			
2		RFS	PAD6-65BC1S1R, 6' Dish w/Radome	1			
3			38891A SIDE STRUTS	1			
4		EUPEN	EWP63 ELLIPTICAL WAVEGUIDE	80			
5		EUPEN	EU63PCPR137G, Waveguide Connector TOP	1			
6		EUPEN	EU63PCPR137G, Waveguide Connector BOTTOM	1			
7		EUPEN	TF137-CC1-036Lm Flex Twist Waveguide	1			
8		EUPEN	TF137-CC1-036Lm Flex Twist Waveguide	1			
9		EUPEN	CBW-PW-G137, Pressure Window	1			
10		EUPEN	GK-S63, Grounding Kit	3			
11		EUPEN	HG-64, Hoisting Grip	3			
12			42396A-7 WAVEGUIDE HANGER KIT	15			
13			31768A ANGLE ADAPTOR KIT	1			
14			31771-4 THREADED ROD SUPPORT	1			
15			48950-1 WALL FEED THRU PLATE, SINGLE OPENING	1			
16			48939-63 5-INCH BOOT	1			
17		COMMSCOPE	MR050-81037, Dehydrator	1			
18		RFS	GDM-2, 2 Port Manifold	1			
TRANSMIT FREQUENCY / POLARIZATION				6635H			
AZIMUTH				220.22			
AGL ELEVATION				54			



NOTES	
1. MINIMUM BEND RADIUS OF WAVEGUIDE (IN INCHES)	
E-PLANE	EWP63 (6GHZ)
H-PLANE	7
	20
2. OBSERVE FEEHORN POLARIZATION. INSTALL WITH POLARIZATION AS NOTED IN CHART.	
3. INSTALL DISH ORIENTED TO THE BEARING INDICATED IN THE CHART.	

Communications International		MBP (unconfigured)	
CITY OF CLEARWATER SIMULCAST SYTEMS		NORTH SITE	
PREPARED BY: A. Blankenship		MICROWAVE ANTENNA SYSTEM	
DATE: 9/1/2015			
DWG: CLNORTH-10207		REV. F	SHEET 3 OF 4



COAX ENTRY PORT
(VIEWED FROM INSIDE)

- 1. UNKNOWN ANTENNA.
- 2. UNKNOWN ANTENNA.
- 3. UNKNOWN ANTENNA.
- 4. PINELLAS COUNTY MICROWAVE.
- 5. PINELLAS COUNTY MICROWAVE.
- 6. UNKNOWN ANTENNA.
- 7. PINELLAS COUNTY 800 RX ANTENNA.
- 8. CLEARWATER TX 2, 800MHz BMR 10 O @ 300', 1 5/8" HELIAX, ONE BLUE STRIPE.
- 9. CLEARWATER RX, 800MHz BMR 10 O @ 300', 7/8" HELIAX, ONE GREEN STRIPE.
- 10. OPEN.
- 11. CLEARWATER MICROWAVE TO MAIN SITE, GPS 3 AND GPS 4 FOR P25 SITE.
- 12. UNKNOWN ANTENNA.
- 13. CLEARWATER TX 1, 800MHz BMR 10 O @ 300', 1 5/8" HELIAX, ONE RED STRIPE.
- 14. UNKNOWN ANTENNA.
- 15. PINELLAS COUNTY MICROWAVE
- 16. EDACS GPS ANTENNA 1.
- 17. EDACS GPS ANTENNA 2.
- 18. PINELLAS COUNTY MICROWAVE.
- 19. PINELLAS COUNTY GPS.
- 20. PINELLAS COUNTY MICROWAVE.
- 21. UNKNOWN ANTENNA.
- 22. 800MHZ RX TEST PORT.
- 23. OPEN.
- 24. COUNTY 821 TX.