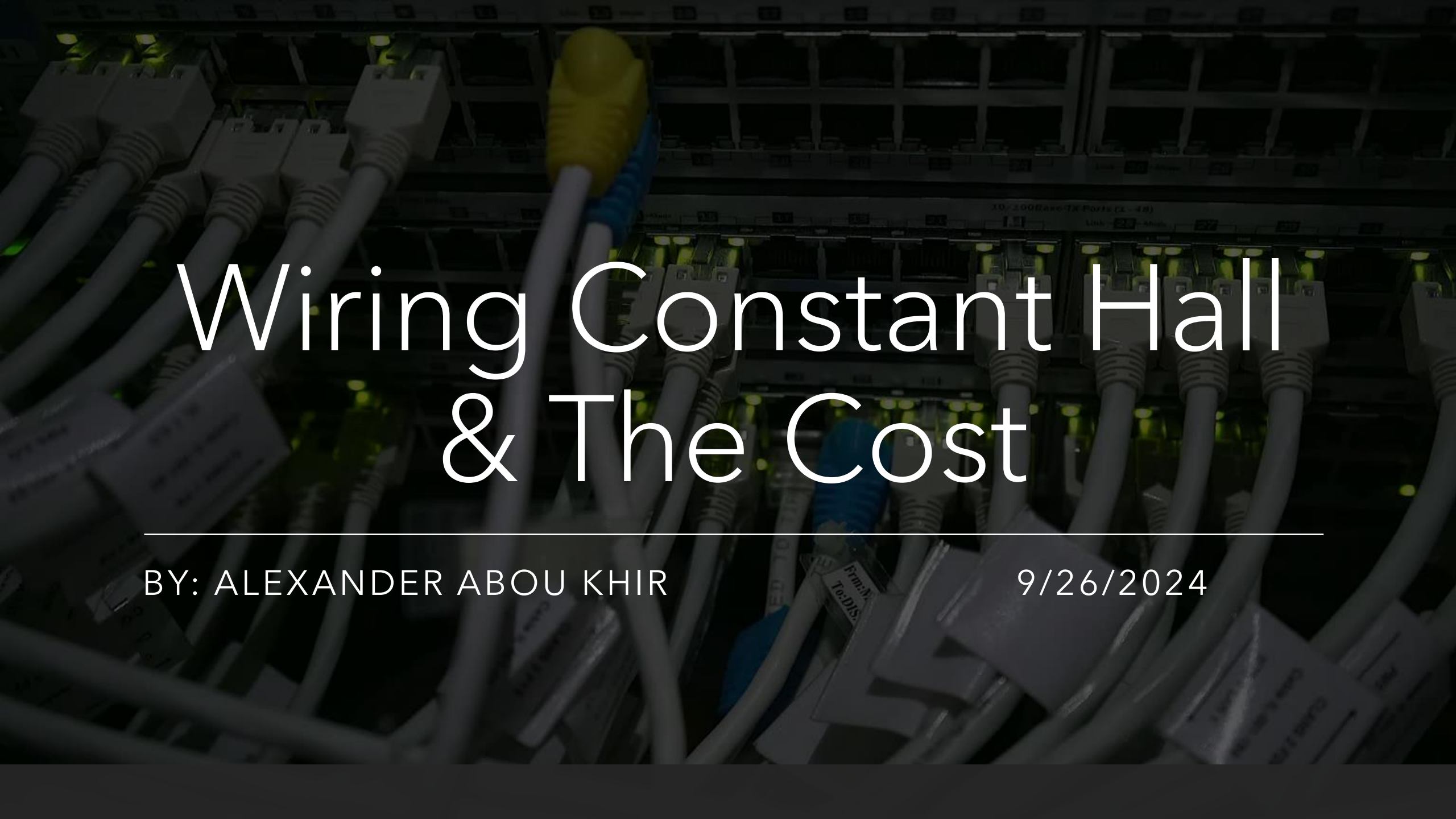




Wiring Constant Hall & The Cost

BY: ALEXANDER ABOU KHIR

9/26/2024

The Diagram Floor 1

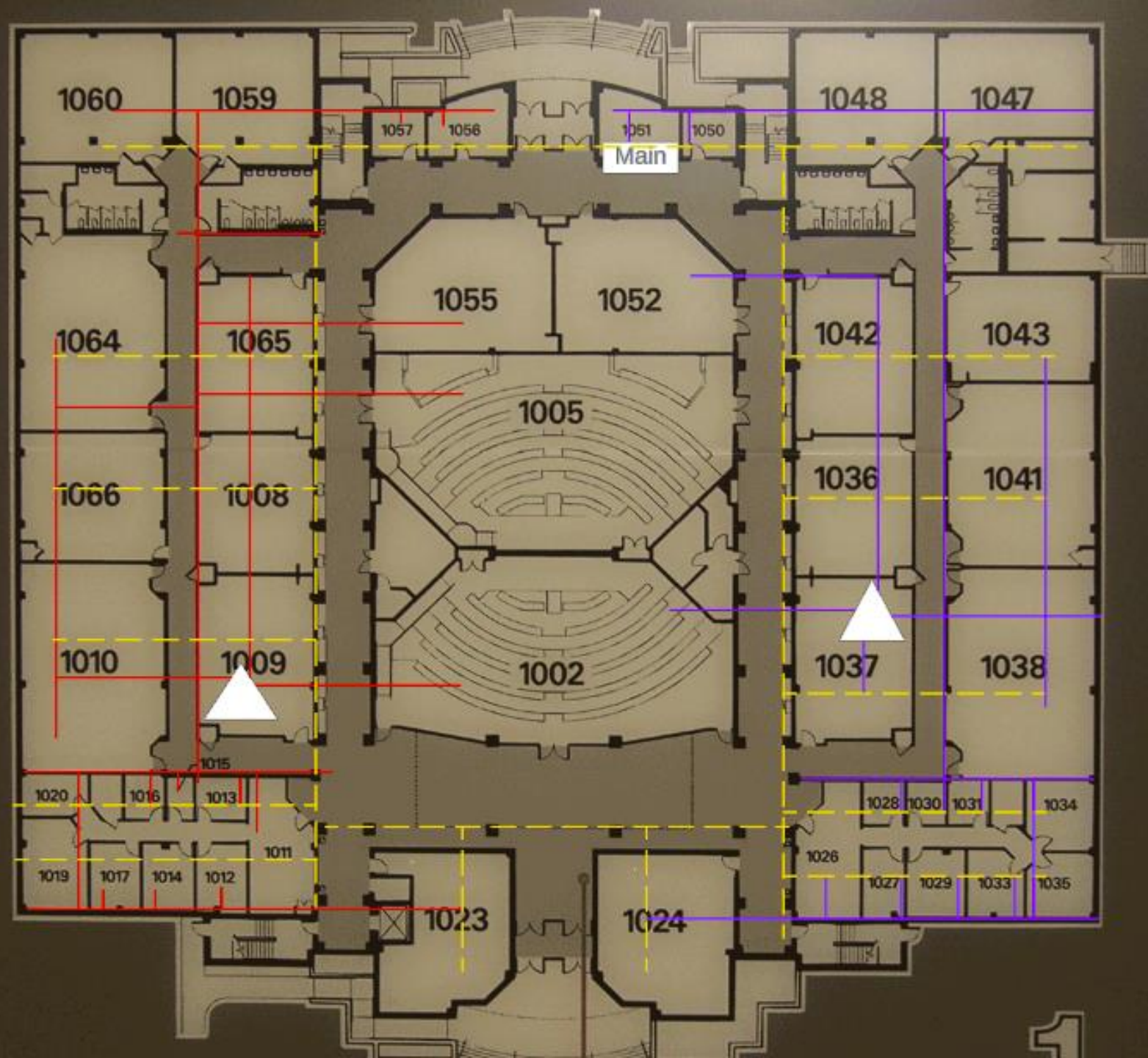
East and West Closets connect to their Central Room by interweaving each other. Separated in half in case of malfunction in one closet, creating redundancy.

Legend:

1 line (vertical or horizontal) = 2 cables
Triangles = Cable Closet Location

Square/Yellow Dotted = Central Main Closet

Red = West Cable Closet
Purple = East Cable Closet
1 inch equals 30 meters



The Diagram Floor 2

Same Approach as 1st floor, and both floors I chose Extended Star topology because this network expands the entire building and needs redundancy to keep it running

Legend:

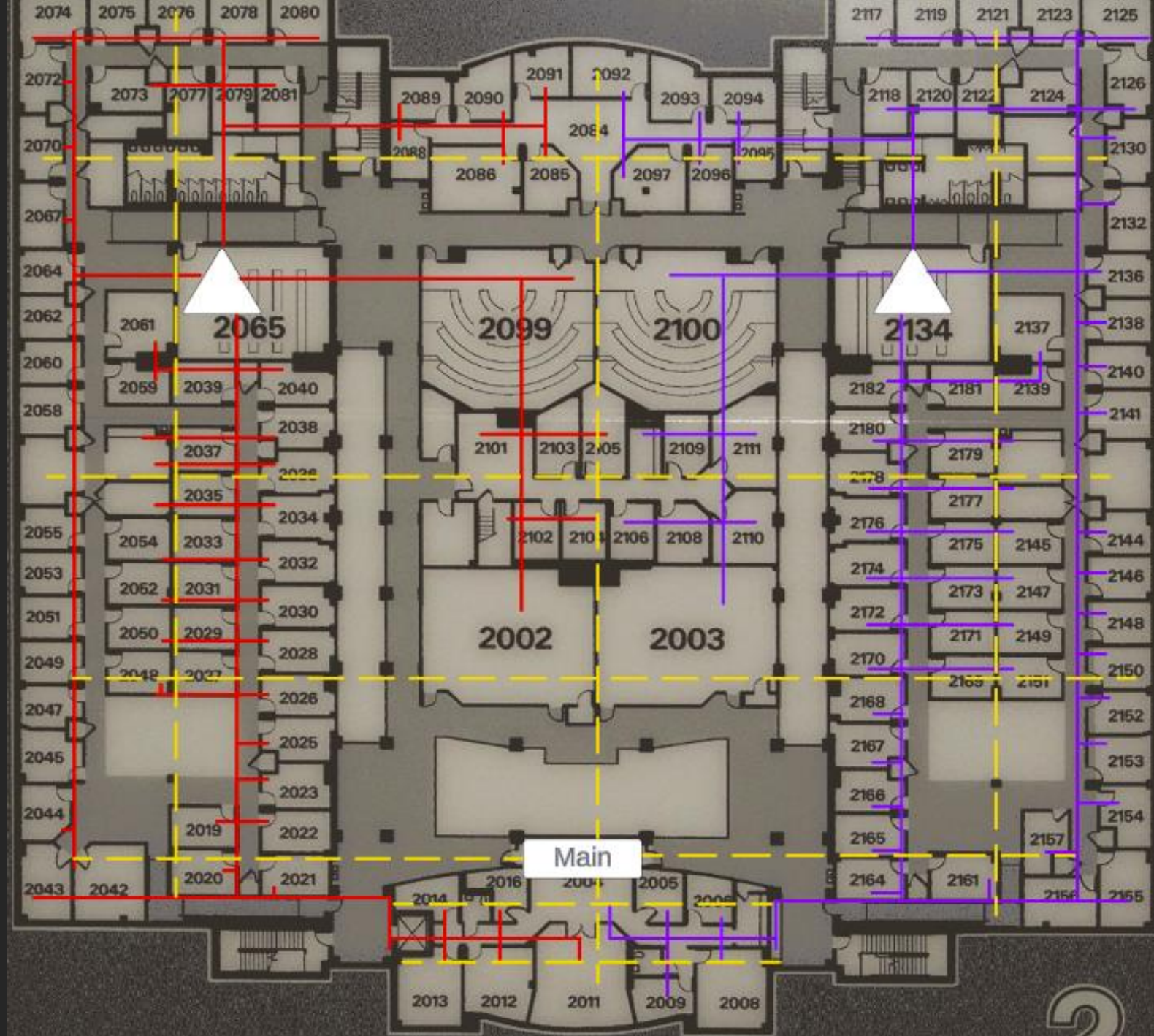
1 line (vertical or horizontal) = 2 cables
Triangles = Cable Closet Location

Square/Yellow Dotted = Central Main Closet

Red = West Cable Closet

Purple = East Cable Closet

1 inch equals 30 meters



Name	Price	Number Needed	Total Price	
1000ft Cat 5e	\$64.49	14	\$902.86	
100 bulk Keystone Cat 5e	\$68.40	2	\$136.80	
10/pack 2-port Faceplates	\$9.99	10	\$99.90	
48-Port Patch panels	\$49.99	3	\$149.97	
GEARIT 24-Pack, Cat5e Patch Cable	\$33.48	6	\$200.88	
			\$1,490.41	Final Price

Floor 1 Cost

AFTER CAREFUL
CALCULATED RESOURCE
MANAGEMENT, THIS IS
WHAT IS NEEDED FOR
THE PROJECT.

Name	Price	Number Needed	Total Price	
1000ft Cat 5e	\$64.49	16	\$1,031.84	
100 bulk Keystone Cat 5e	\$68.40	3	\$205.20	
10/pack 2-port Faceplates	\$9.99	24	\$239.76	
48-Port Patch panels	\$49.99	6	\$299.94	
GEARIT 24-Pack, Cat5e Patch Cable	\$33.48	12	\$401.76	
			\$2,178.50	Final Price

Floor 2 cost

The second floor had a bigger margin of cost for the increase of rooms, needing more resources to complete the project.

Name	Price	Number Needed	Total Price	
1000ft Cat 5e	\$64.49	30	\$1,934.70	
100 bulk Keystone Cat 5e	\$68.40	5	\$342.00	
10/pack 2-port Faceplates	\$9.99	34	\$339.66	
48-Port Patch panels	\$49.99	9	\$449.91	
GEARIT 24-Pack, Cat5e Patch Cable	\$33.48	18	\$602.64	
			\$3,668.91	Final Price

Total cost of both floors

& SLIGHTLY STILL HAVE
MORE RESOURCES TO
EXPAND THE NETWORK

Links of the products purchased for networking project & Work for Adding Cables

1st floor: $18+22+9+6+33+38+4+70 \mid + 44+18+27 = 289$ meters

2nd floor $13+7+2+22+18+15+23+10+20+22+44+8+20 \mid +18+20+16+65 = 343$ meters

Patch Cable: https://www.amazon.com/GearIt-24-Pack-Cat5e-Ethernet-Patch/dp/B00X8F4N9I/ref=sr_1_3?crid=370R7K6I3TA01&dib=eyJ2IjojMSJ9.WWA3kkapZXxn1ZDAIL7_iYEFsqZOKTTGsalvLpvL_kjn3MB23n4egjd6XXIbJ7G1-QrIMZzJa-3S11WPgG2W5IKS4TXhxxUg1fRrxntLnIX3EBNpeKSETpQTD_OaY9vgdS2ZeqfoiNNkXrOz79XSoU3I5sM7ruUSo4YftgFbR0BhTr7KrybBC6AueIVw2zMDOx-D7LTDUb_ZyKFrglqMsLGJrzq0emxQivDilB7vIU.aAejbJQC0Ik89dxvcN23txrZvQI42w2U0pONRfOa1Wc&dib_tag=se&keywords=cat5e%2Bbulk%2Bpatch%2Bcable&qid=1727840163&prefix=cat5e%2Bbulk%2Bpatch%2Bcable%2Caps%2C65&sr=8-3&th=1

Cat 5e: https://www.amazon.com/Gigabit-Ethernet-Network-Unshielded-Twisted/dp/B00AM15FIE/ref=sr_1_1_sspa?s=electronics&sr=1-1-spons&sp_csd=d2lkZ2V0TmFtZT1zcF9hdGY

Keystones cat 5e: https://www.amazon.com/CNAweb-Cat5e-Modular-Keystone-Style/dp/B01G7ZOYOE/ref=sr_1_6?sr=8-6

Faceplates: <https://www.amazon.com/10-Pack-Profile-Faceplate-Ethernet-Keystone/dp/B09G7BR36H>

Patch Panels: https://www.amazon.com/TRENDnet-Unshielded-Wallmount-Compatible-TC-P48C5E/dp/B00008AWL4/ref=sr_1_3?sr=8-3