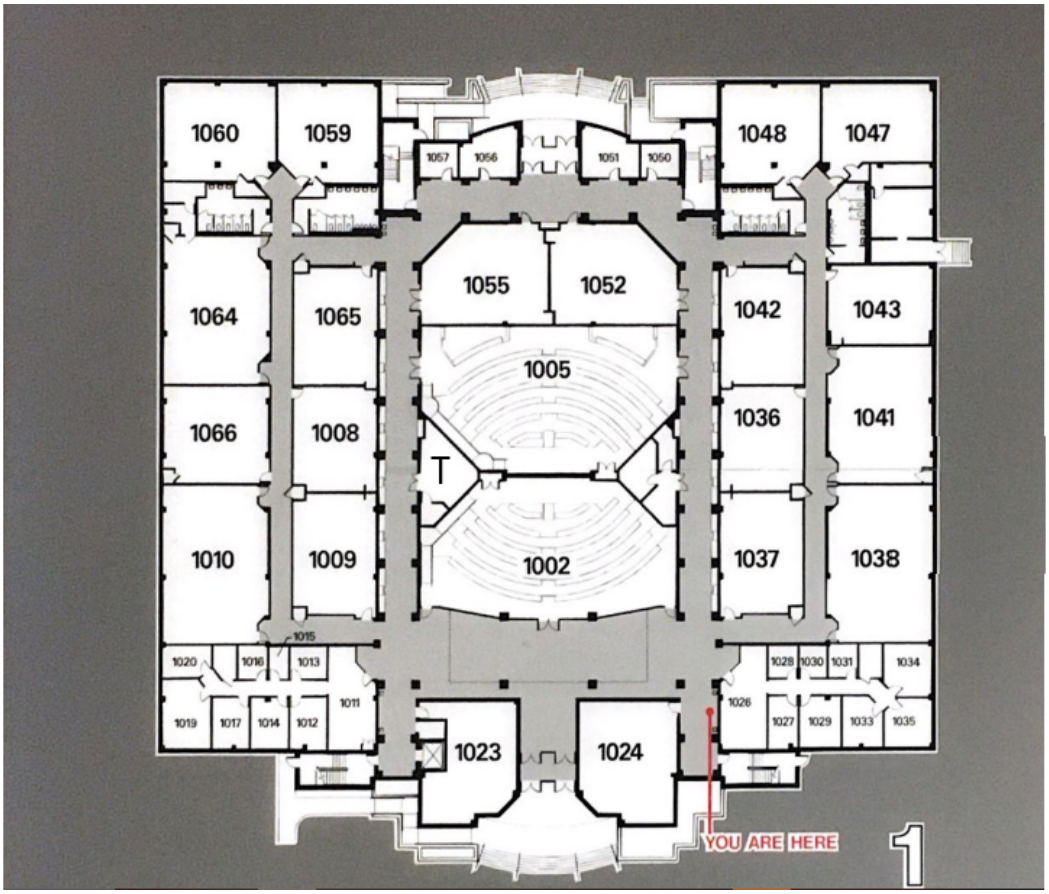
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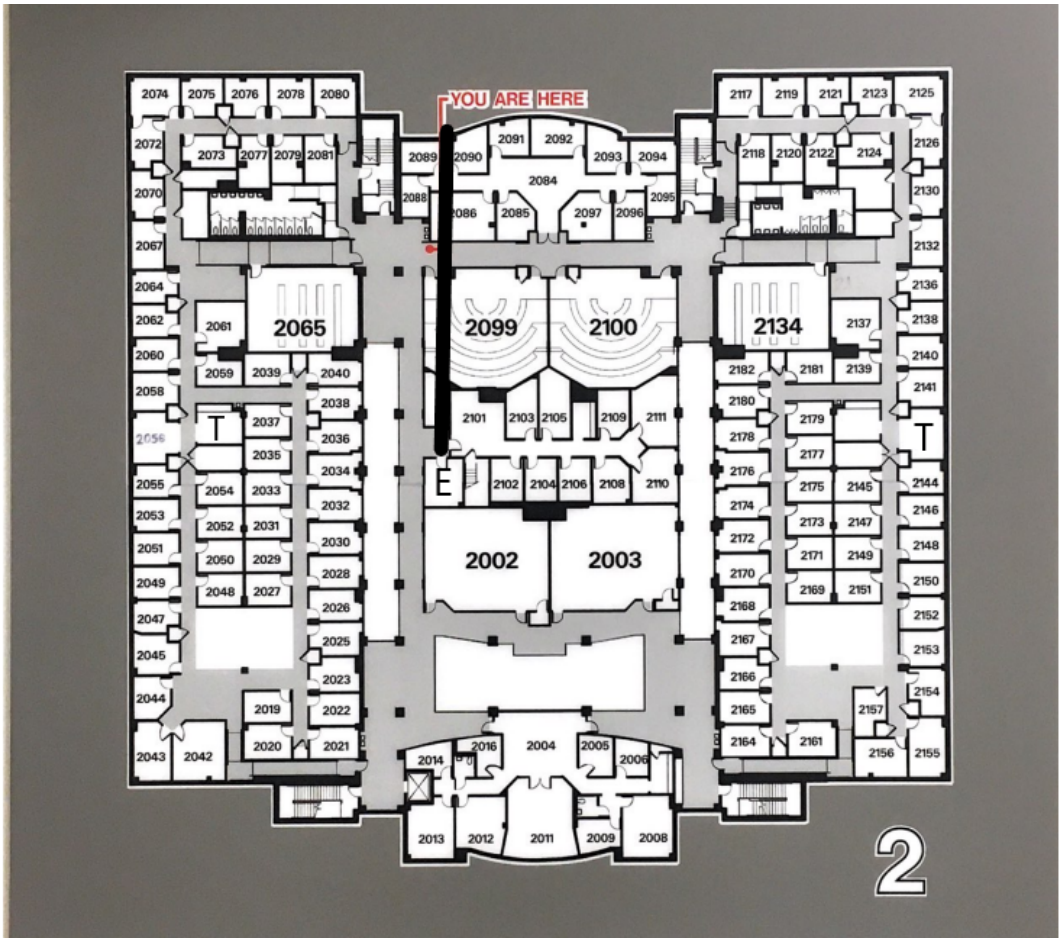

The topology i'd use is extended star topology, having the equipment room be the center and then connect to the telecomm rooms and then they would break off into their respective rooms.

Floor 1 has a total of 43 rooms which means 86 Cat5/e ports needed.
Floor 2 has a total of 153 rooms which means 306 Cat5/e ports needed.
Telecommunications closet 1 will service 43 rooms on the first floor; total of 86 ports
Telecommunications closet 2 will service 57 rooms on the second floor; total of 114 ports
Telecommunications closet 3 will service 57 rooms on the second floor; 114 ports
Equipment room will service 39 rooms on the second floor; 78 ports

Equipment room shortest distance = 1cm; longest dist. = 16cm; = 24.65 m
Telecom Closet 1 shortest distance = 1cm; longest dist. = 13cm; = 21.35 m
Telecom Closet 2 shortest distance = 1cm; longest dist. = 9.5cm; = 13.28 m
Telecom Closet 3 shortest distance = 1cm; longest dist. = 8cm; = 11.92 m
Floor 1 cable needed = 2318.8 m; Floor 2 cable needed = 5138.82 m; floor to ceiling = 1218 m
Total Cable = 8675.62 m (This is with 1 cm = 3.10 m)

Materials Budgetger 1000' Ft Bulk Cat5e 24 AWG UTP
Twisted Pair Solid Network Ethernet Cable Blue
Quantity: 29 | Price: $36.97 | Total Cost = $1,072.13| amazon.com
Ethernet Network Cat5e Wall Plate - Dual
(2 Port) RJ45 Connector Socket
Quantity: 197 | Price: $6.99 | Total Cost = $1,377.03 | newegg.com
TRIPP LITE 48-Port 2U Rackmount Cat5e
110 Patch Panel, 568B, RJ45 Ethernet
Quantity: 10 | Price: $63.83 | Total Cost: $638.30 | newegg.com
Total Cost = $3,087.46