

## Republic of the Philippines

#### **BENGUET STATE UNIVERSITY**

La Trinidad, Benguet Telefax No. (074) 661-1839; Email: procurement@bsu.edu.ph

#### **SUPPLEMENTAL / BID BULLETIN**

Addendum No. 2022-04

This Supplemental/bid bulletin is being issued to advise prospective bidders and to modify/amend certain items in the instructions in the Bidding Documents. The Bidding Documents and all papers previously issued in relation to the said project is hereby amended as follows:

# A. IB No. 2022-18 – Fiber Optics Backbone Cabling at La Trinidad Campus (ABC: Php. 5,600,000.00)

- Provide 10% of spare parts as defined below:
  - o 2-3 meter LC-LC Fiber-optic patch cords
  - o Circuit breakers
  - o Rack mounting screws, nuts & bolts
  - Exhaust fans
  - Door locks compatible with provided master key
- Provide at least 3 meters service loops for each wall-mount cabinet and 6 meters service loops for each standing cabinet or standing open-frame rack
- Yellow (for higher visibility) fiber conduits must be used with the buried fiber-optic cable, electro-magnetic tubing (EMT) must be used when entering and inside buildings
- Please refer to the estimated cable lengths in Annex A
- Detailed test results will be provided for every link using the parameters shown below:

PARAMETER	ACCEPTED	REJECTED
CABLE STATUS	PASS	FAIL
TEST LIMIT	TIA 568-B.3	custom test
MAXIMUM FOC LOSS		
Figure 1, Loop A	5.65 dB	above max, negative result
Figure 1, Loop B	5.68 dB	above max, negative result
Figure 1, Loop C	4.26 dB	above max, negative result
Figure 1, Loop D	2.96 dB	above max, negative result
Figure 1, Loop E	2.91 dB	above max, negative result
Figure 1, Loop F	2.88 dB	above max, negative result
Figure 2, Loop A	4.36 dB	above max, negative result
Figure 2, Loop B	4.36 dB	above max, negative result
Figure 2, Loop C	2.91 dB	above max, negative result
Figure 2, Loop D	2.91 dB	above max, negative result
Figure 2, Loop E	4.22 dB	above max, negative result
Figure 2, Loop F	4.29 dB	above max, negative result
Figure 2, Loop G	2.94 dB	above max, negative result
Figure 3, Loop A	5.69 dB	above max, negative result
Figure 3, Loop B	5.68 dB	above max, negative result

Figure 3, Loop C	2.9 dB	above max, negative result
DATA RATES		
40GbE	YES	NO
10GbE	YES	NO
1GbE	YES	NO

Note: Maximum FOC loss may vary based on actual cable length installed.

# B. IB No. 2022-19 – Structured Local Area Network (LAN) Cabling at the La Trinidad Campus

(ABC: Php. 3,862,615.22)

- Provide 10% of spare parts as defined below:
  - 1-meter patch cords
  - Circuit breakers
  - o Rack mounting screws, nuts & bolts
  - Power distribution units
  - o CAT6 punch down keystone jack
  - Exhaust fans
  - Door locks compatible with provided master keys
  - Messenger rope wire kits
- Install 3U open-frame wall-mounted data rack/bracket for PC laboratories (please refer to Annex B, see notes starting in page 4)
- Raceways can be flexible PVC, or galvanized/stainless steel (please refer to Annex B, see notes starting in page 4)
- Estimated lengths of main copper uplinks (please refer to Annex B)
- IIT location is removed in the Smart Campus Annex B, Figure 6
- The cable's PLENUM requirement is removed in the Smart Campus Annex B notes (starting page 4)
- Detailed verification and qualification cable results will be provided for every permanent copper link. Refer to the table below.

PATCH PANEL	REMOTE END	Length (meters)	Wire Mapping	Continuity	1GbE	PoE
Port #1	CA Dean 01	100 below	Pass	Pass	Pass	Pass
Port #2	CTE Main Switch	101 above	Pass	Pass	Pass	not required

#### Others:

- Working hours for structured LAN cabling and fiber optics backbone layout will be from 8:00 AM to 5:00 PM Monday to Friday. Working beyond these hours can be coordinated with the university subject for approval.
- The supplier will act on behalf of the university to create an agreement with BENECO where aerial installations need to be co-located with electric posts.

This Supplemental Bid Bulletin No. 4 shall form an integral part of the Bidding Documents. Any provision in the Bidding Documents and other documents inconsistent herewith is hereby amended, modified and superseded accordingly. Other provisions shall remain in full force and effect.

**REYNANTE B. BASCO** 

Chair, Bids and Awards Committee

By:

#### (Sgd) BRYAN C. BANGNAN

Vice Chair, Bids and Awards Committee

#### **COPPER NETWORK UPLINKS**



Figure 1. Copper Uplinks North Campus

UPLINK	ESTIMATED LENGTH
CEAT → MOTORPOOL	80 meters
CHK → GYM	36 meters
GYM → COURT	68 meters

Table 1. Estimated Copper Cable Uplink Lengths



Figure 2. Copper Uplinks Northwest Campus

UPLINK	ESTIMATED LENGTH
R&E BLDG → ATBI/IC	56 meters
ATBI/IC → VPC	62 meters

Table 2. Estimated Copper Cable Uplink Lengths

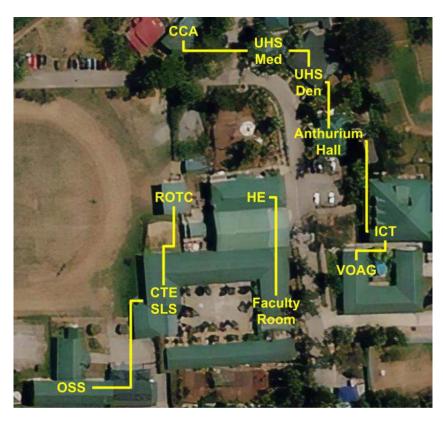


Figure 3. Copper Uplinks Central Campus A

UPLINK	ESTIMATED LENGTH
OSS → CTE SLS	80 meters
CTE SLS → ROTC	36 meters
Faculty Room → HE	76 meters
ICT → VOAG	30 meters
ICT → Anthurium Hall	66 meters
Anthurium Hall → UHS Den	56 meters
UHS Den → UHS Med	48 meters
UHS Med → CCA	60 meters

Table 3. Estimated Copper Cable Uplink Lengths

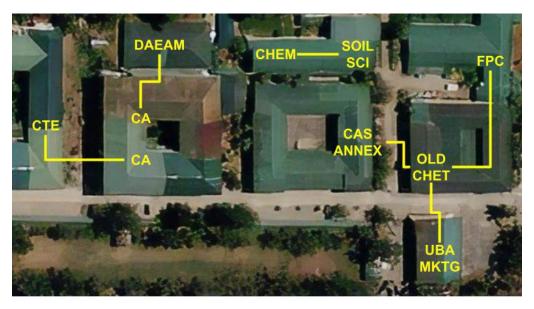


Figure 4. Copper Uplinks Central Campus B

UPLINK	ESTIMATED LENGTH
CTE → CA	62 meters
CA → DAEAM	48 meters
CHEM → SOIL SCI	42 meters
CAS ANNEX → OLD CHET	70 meters
CAS ANNEX → UBA MKTG	78 meters
OLD CHET → FPC	68 meters

Table 4. Estimated Copper Cable Uplink Lengths

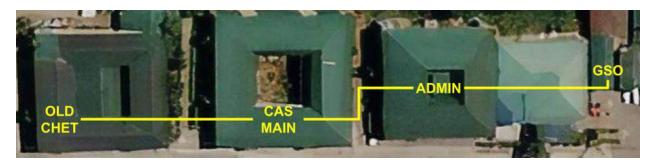


Figure 5. Copper Uplinks Central Campus C

UPLINK	ESTIMATED LENGTH
OLD CHET → CAS MAIN	105 meters
CAS MAIN → ADMIN	69 meters
ADMIN → GSO	32 meters

Table 5. Estimated Copper Cable Uplink Lengths

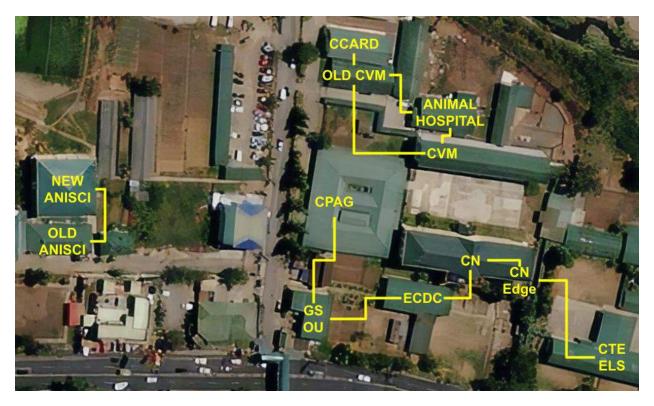


Figure 6. Copper Uplinks South Campus

UPLINK	ESTIMATED LENGTH
NEW ANISCI → OLD ANISCI	50 meters
CPAG → GS OU	58 meters
GS OU → ECDC	57 meters
CN → ECDC	54 meters
CN → CN Edge	30 meters
CN Edge → CTE ELS	68 meters
CVM → Old CVM	75 meters

CVM → ANIMAL HOSPITAL	18 meters
OLD CVM → ANIMAL HOSPITAL	60 meters
OLD CVM → CCARD	36 meters

Table 6. Estimated Copper Cable Uplink Lengths

#### NOTE: The supplier will adhere to the following:

• All outdoor copper uplinks will be securely attached to 304 stainless steel messenger rope wire kits with the minimum specifications indicated below.

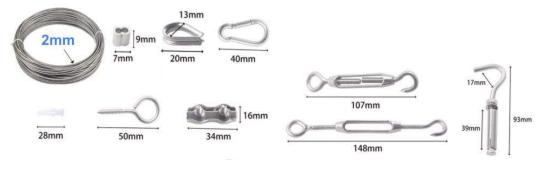


Figure 7. Minimum requirements for outdoor copper uplink messenger.

- CAT6 Outdoor cables will be used for Outdoor links between network devices.
- CAT6 Indoor cables will be used for Indoor links between network devices.
- CAT5e cables will be used for end device links.
- Ethernet cables to be used must contain the Underwriters Laboratories (UL) badges/marks.
- Ethernet cables to be used must be made of pure copper. Copper clad aluminum cables will be REJECTED.
- 12U wall mounted data cabinets will each be installed at locations that will house PoE switches as listed below:
  - o College of Agriculture
    - Back Hallway, First Floor
    - Hallway, Second Floor
    - Hallway, Third Floor
    - Hallway, DAEAM
    - Old Animal Science Building
    - Hallway, First Floor, New Animal Science Building
  - o Former College of Arts & Sciences Main
    - Hallway, Ground Floor
    - Hallway, Second Floor
  - o Former College of Arts & Sciences Annex
    - Hallway, First Floor
  - College of Engineering
    - Main Lobby, First Floor
    - Lobby, Second Floor
    - Hallway, Third Floor
  - College of Forestry
    - Hallway, First Floor
  - New College of Home Economics & Technology
    - Hallway, First Floor
    - Hallway, Third Floor
  - Old College of Home Economics & Technology

- Hallway, First Floor
- Reception Area, Food Processing Center
- College of Human Kinetics
  - Hallway, Second Floor
  - Hallway, Third Floor
  - Covered Court
- o College of Nursing
  - Hallway, First Floor
  - Hallway, Third Floor
- o College of Teacher Education
  - Front Hallway, First Floor Main
  - Back Hallway, First Floor Main
  - Front Hallway, Second Floor Main
  - Faculty Room, CTE-SLS
- College of Veterinary Medicine
  - Hallway, First Floor
  - Hallway, Third Floor
  - Reception Area, Animal Hospital
  - Lobby, Second Floor, CCARD
- o Office for Student Services
  - Lobby, First Floor
- o Anthurium Hall
  - Main Hall
- Graduate School & Open University
  - Main Office, Second Floor
- 6U open data brackets/racks will be installed at the locations listed below:
  - o CA-DAEAM PC Laboratory
  - O CAS Annex PC Laboratory 1 (Room 208)
  - O CAS Annex PC Laboratory 2 (Room 211)
  - O CAS Annex PC Laboratory 3 (Room 212a)
  - o CE PC Laboratory
  - o CF PC Laboratory
  - o CTE PC Laboratory 1
  - O CTE PC Laboratory 2
- 3U open data brackets/racks will be installed at the locations listed below:
  - O CAS Main PC Laboratory (Biology)
  - O CAS Annex PC Laboratory 4 (Room 212b)
  - O Old CHET PC Laboratory
  - o CN Library
  - o CVM Library
  - Graduate School PC Laboratory
  - o Motorpool
- All data cabinets and data racks will contain fully loaded CAT6 24-port punch down copper patch panels complying with ANSI/TIA-568.2-D, ISO/IEC 11801-1 and EN 50173-1 Class E specifications.
- All copper cables will be enclosed in flexible PVC, galvanized/stainless steel cable raceways.
- Cable raceways will be secured to walls/ceilings using rivets/screws.
- Cable raceway installations must allow easy access and/or replacement of cable runs.
- Cable raceway installations must have ample space for additional cable runs.
- IP20/IP30/IP40/IP50 rated data cabinets will be used for fully indoor installations.
- IP55/IP65 rated data cabinets will be used for flood prone, partially indoor and outdoor installations.
- All Patch panels will be properly labeled and printed trace maps stickers will be pasted behind the corresponding data cabinet's front door.
- Connect ALL data cabinets to each respective location's electrical circuit complete with an appropriately rated circuit breaker.
- All Data cabinet locks can be opened by a single master key. Multiple copies of this master key will be provided to the university.

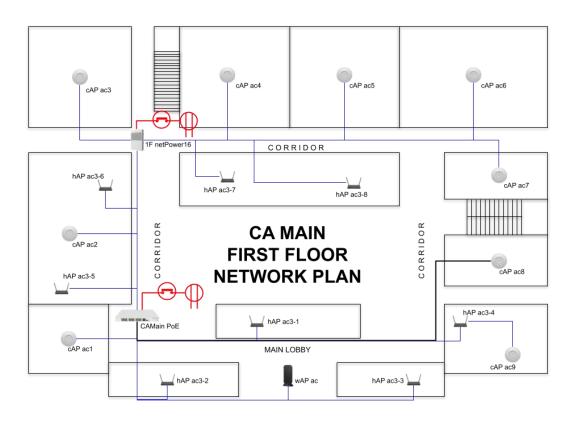
• The data cabinet lock type shown or similar to that below are REJECTED.

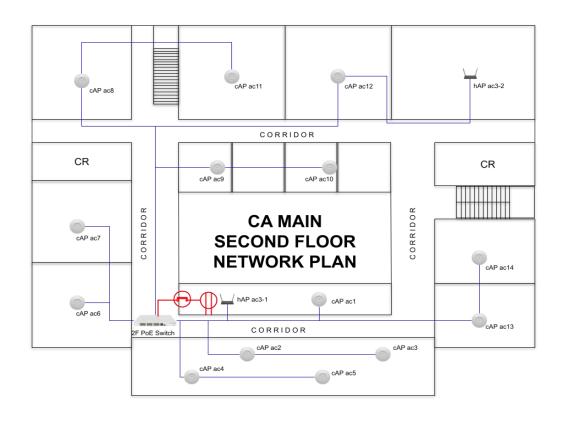


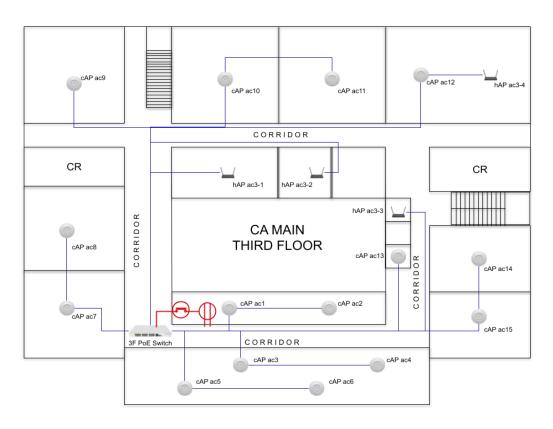
Figure 8. Rejected data cabinet lock and key type

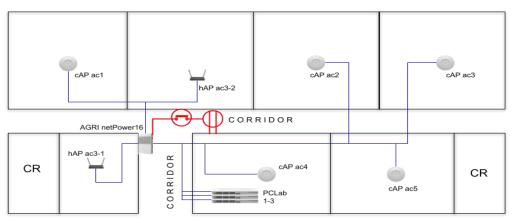
#### **COPPER NETWORK EQUIPMENT DEPLOYMENT PLANS**

#### **College of Agriculture**

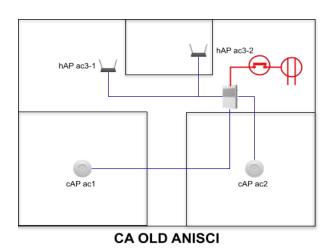








CA DAEAM

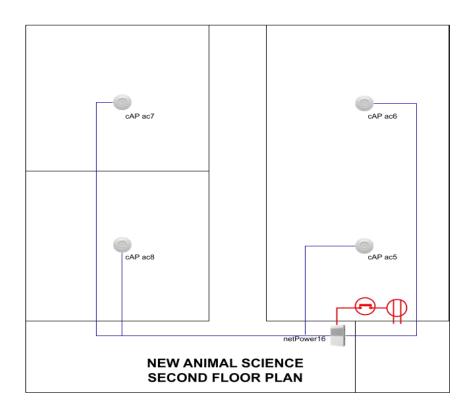


CAP ac3

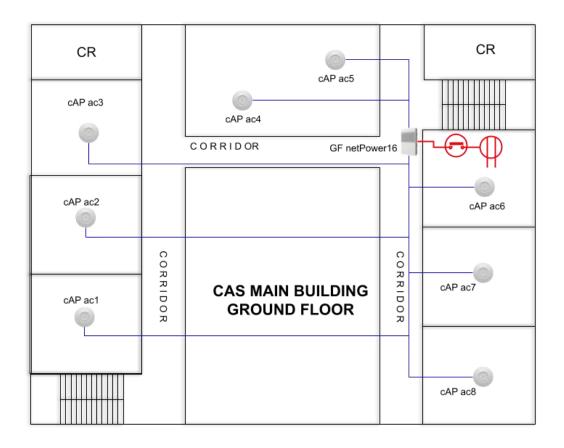
CAP ac2

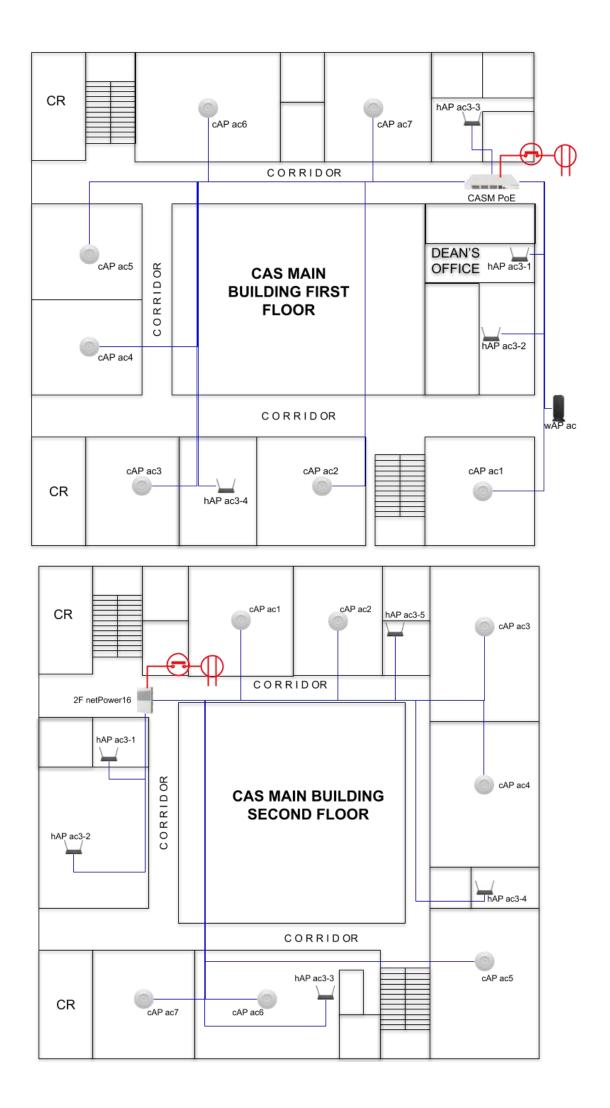
CAP ac1

NEW ANIMAL
SCIENCE GROUND
FLOOR PLAN

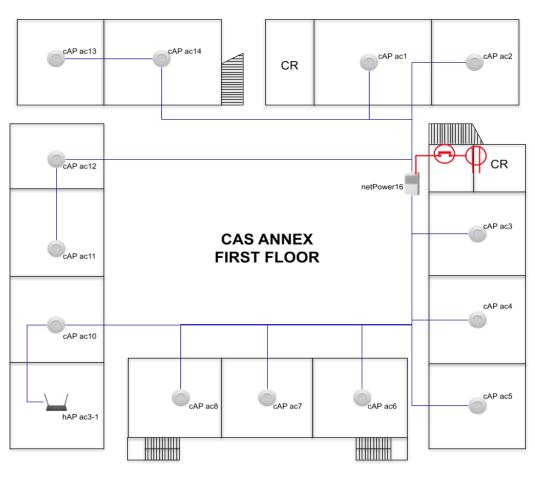


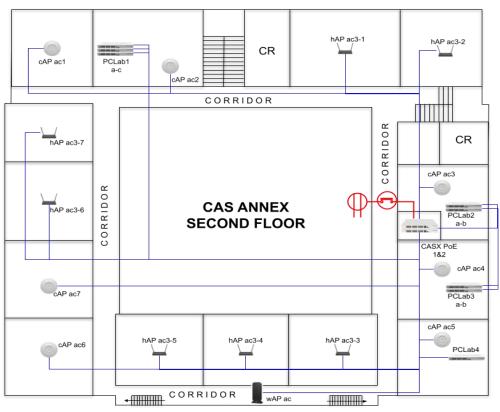
## Former College of Arts & Sciences Main Building



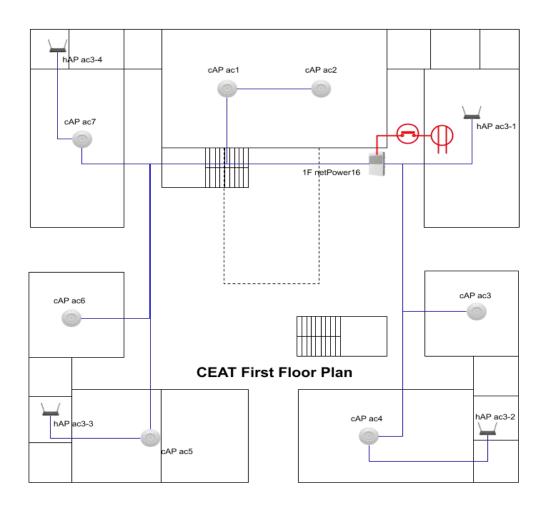


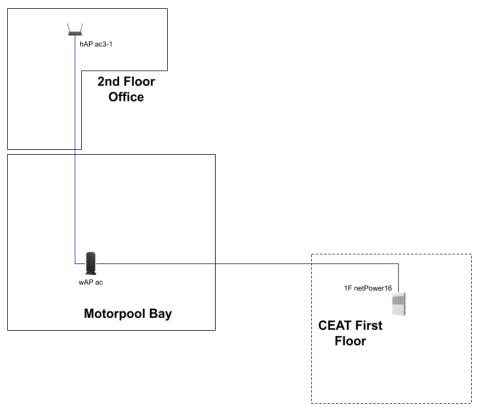
#### Former College of Arts & Sciences Annex Building

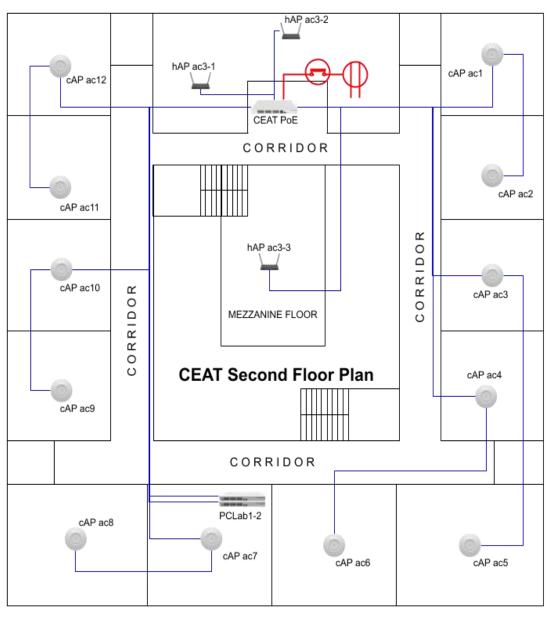


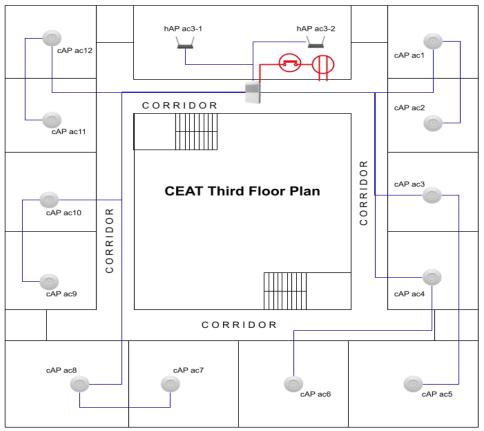


# **College of Engineering and Motorpool**

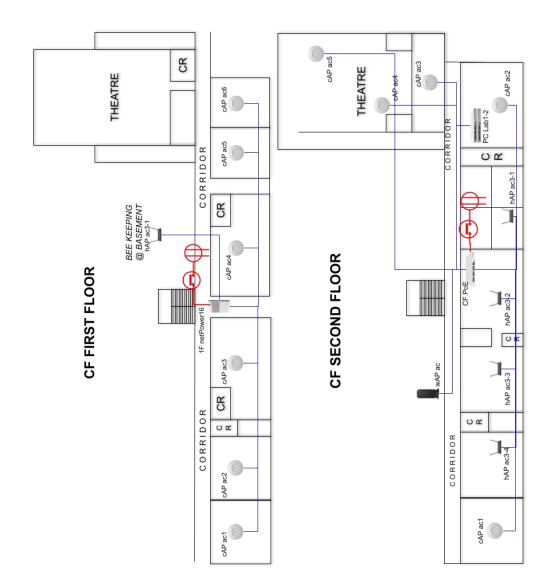




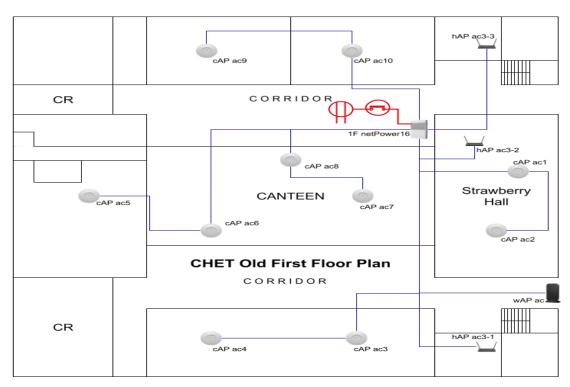


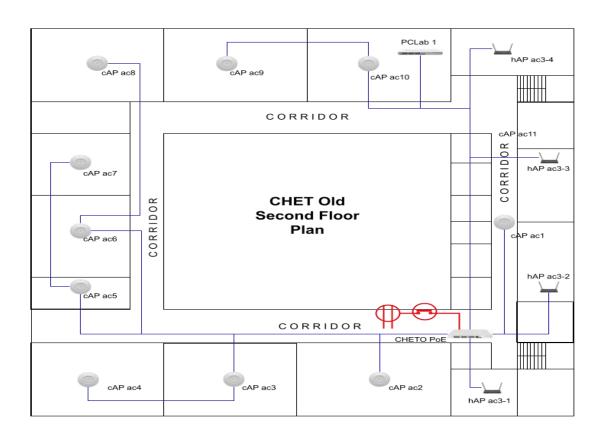


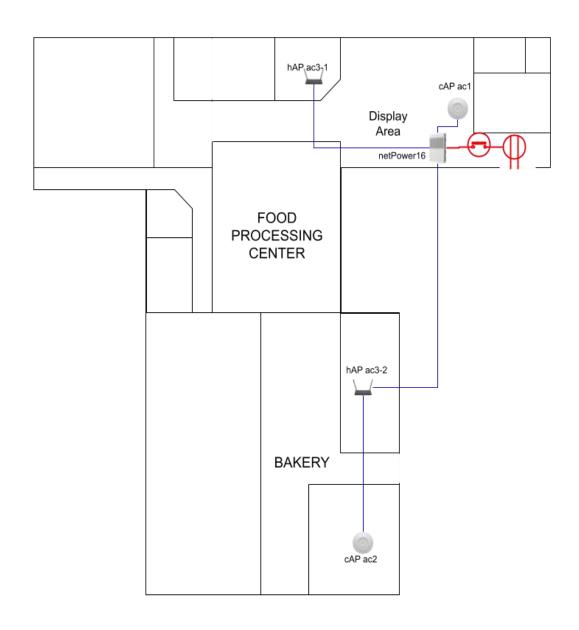
#### **College of Forestry**



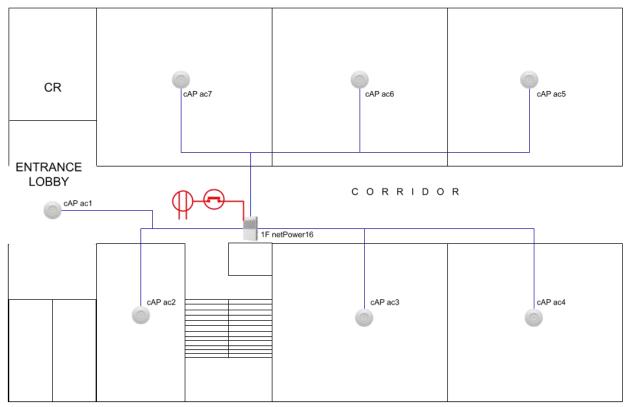
## College of Home Economics & Technology Old Building, Bakery and Food Processing Center



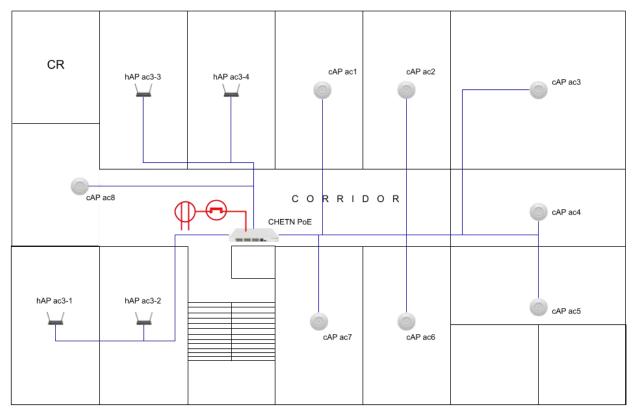




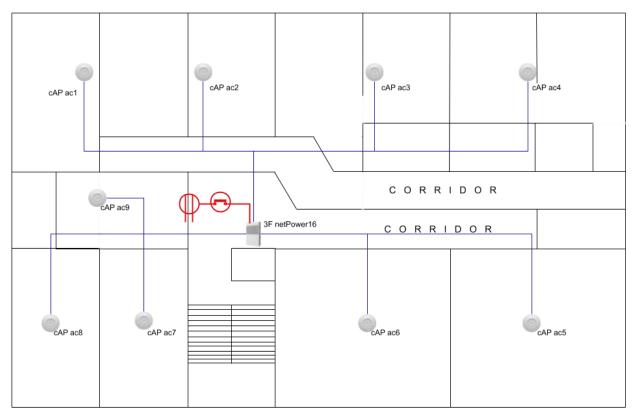
## College of Home Economics & Technology New Laboratory Building



**CHET NEW BUILDING GROUND FLOOR** 

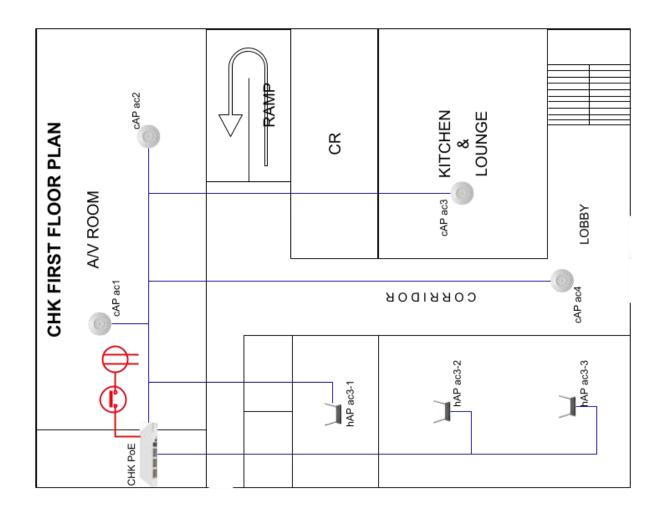


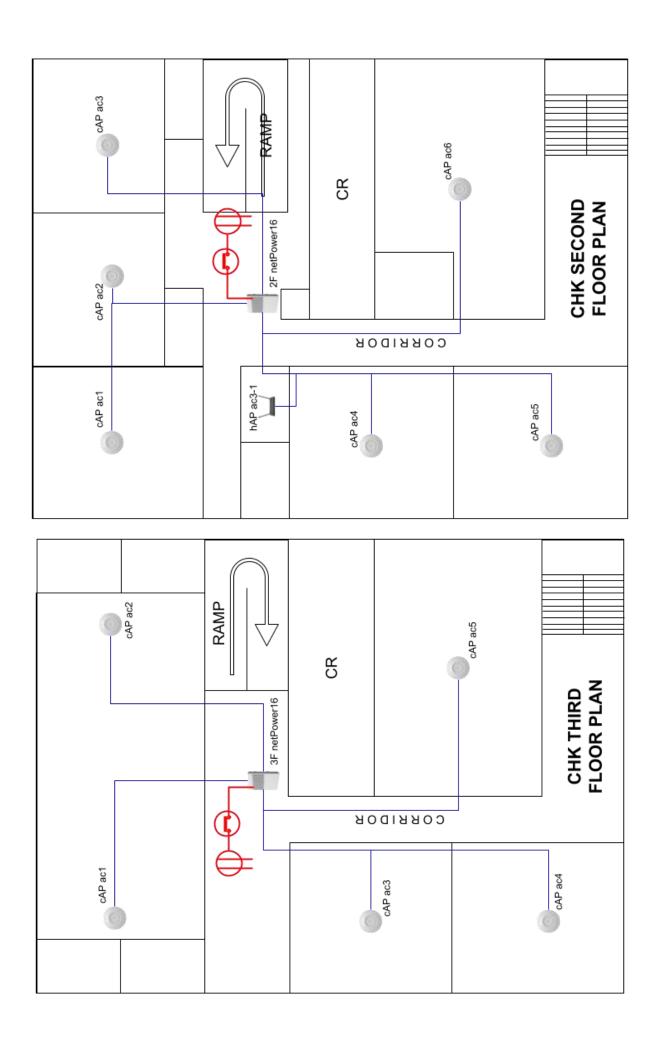
CHET NEW BUILDING SECOND FLOOR

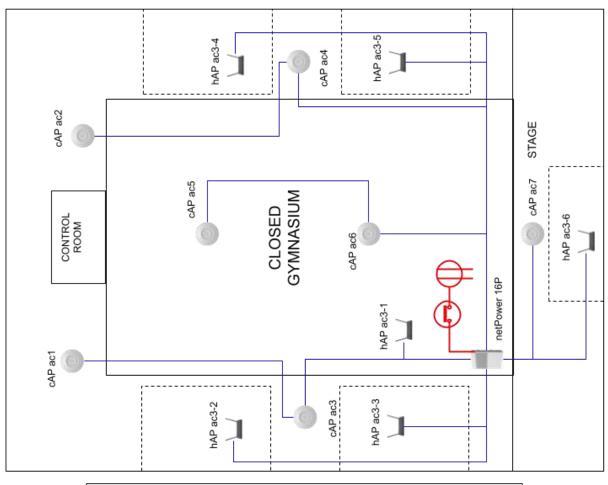


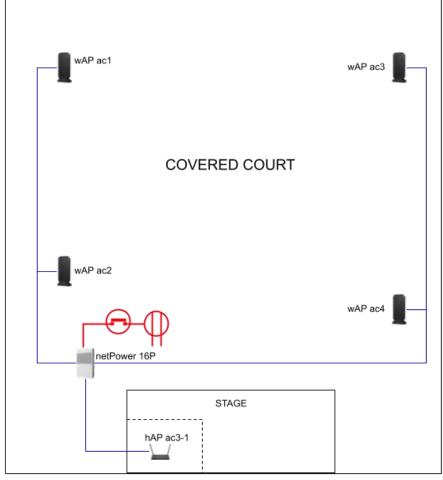
CHET NEW BUILDING THIRD FLOOR

## **College of Human Kinetics**

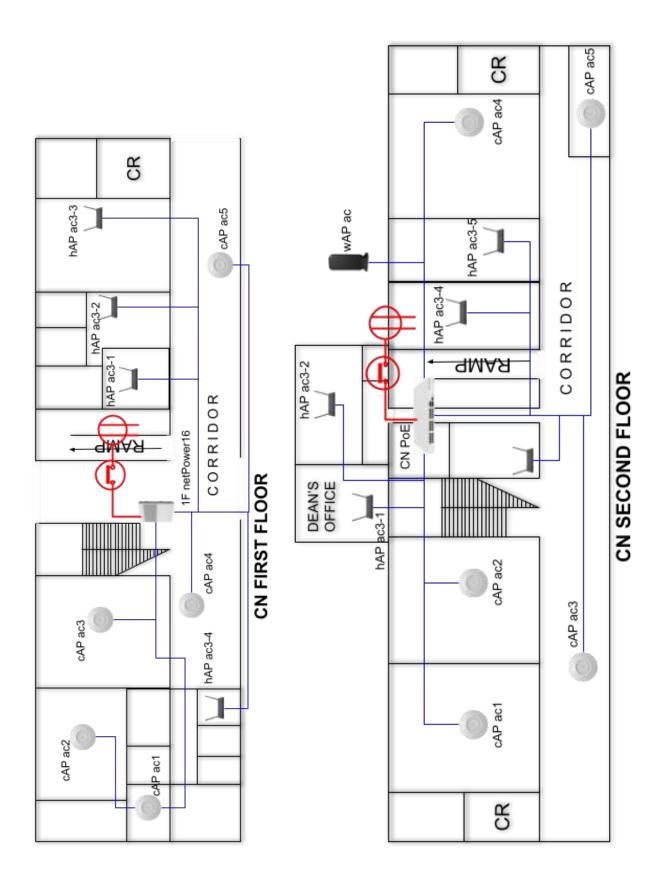


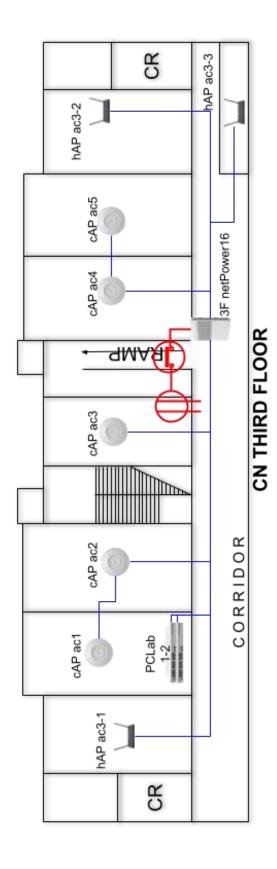




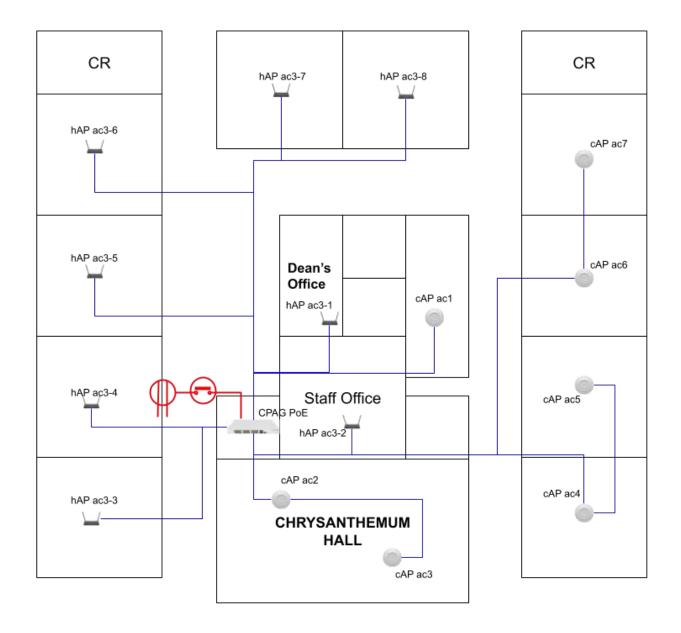


## **College of Nursing**

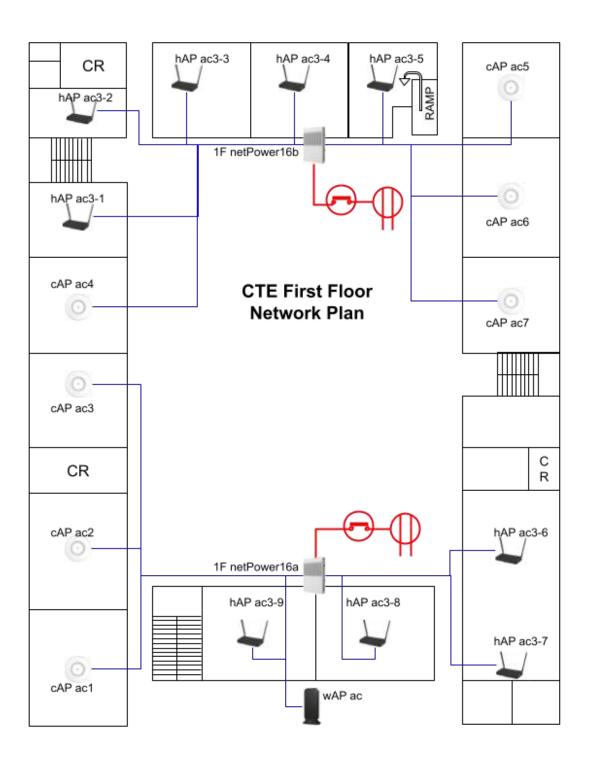


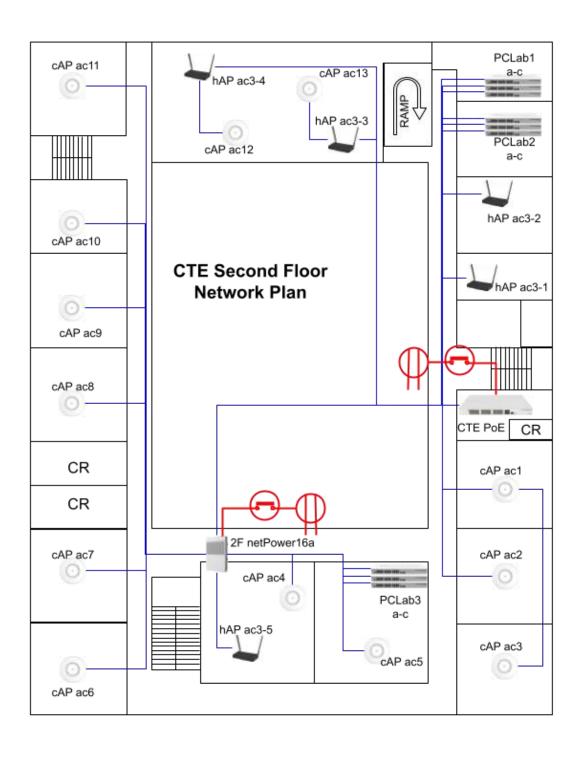


# **College of Public Administration & Governance**

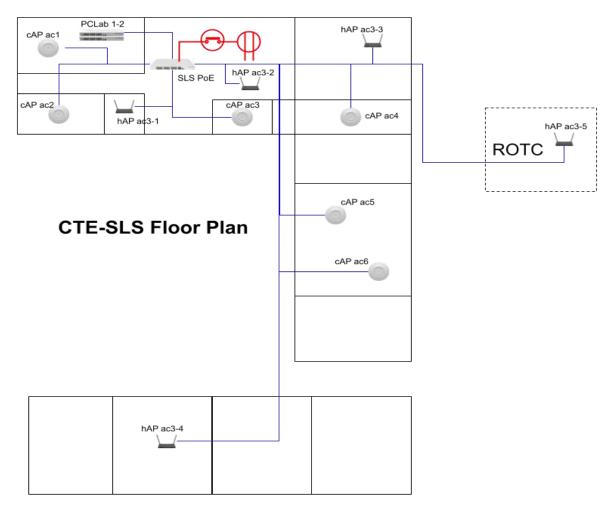


#### **College of Teacher Education Main**

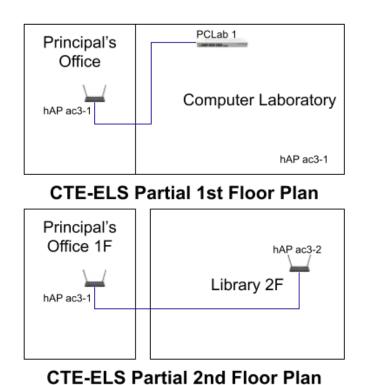




#### **College of Teacher Education Secondary Level School**

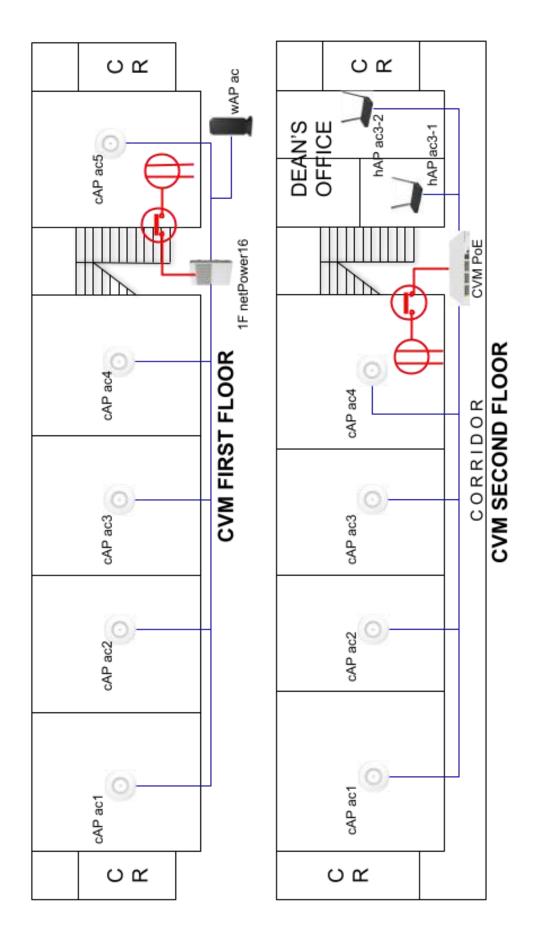


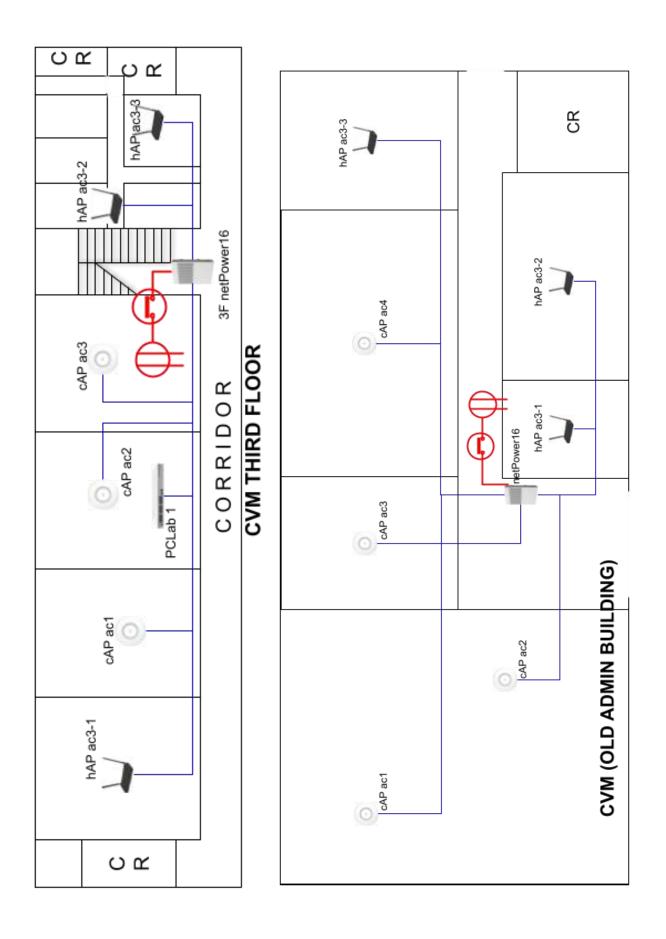
#### **College of Teacher Education Elementary Level School**

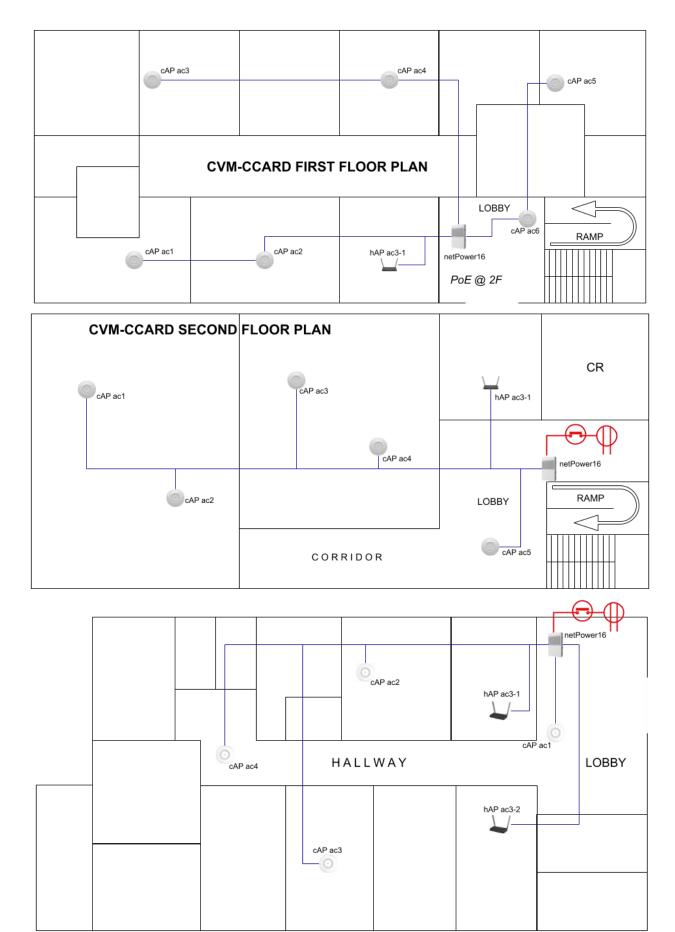


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# **College of Veterinary Medicine**

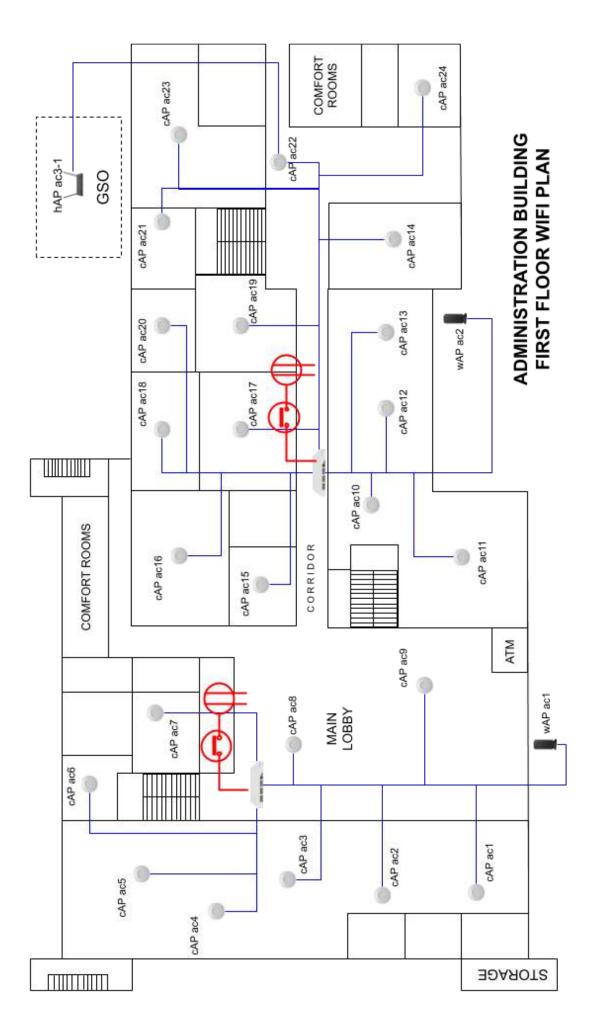


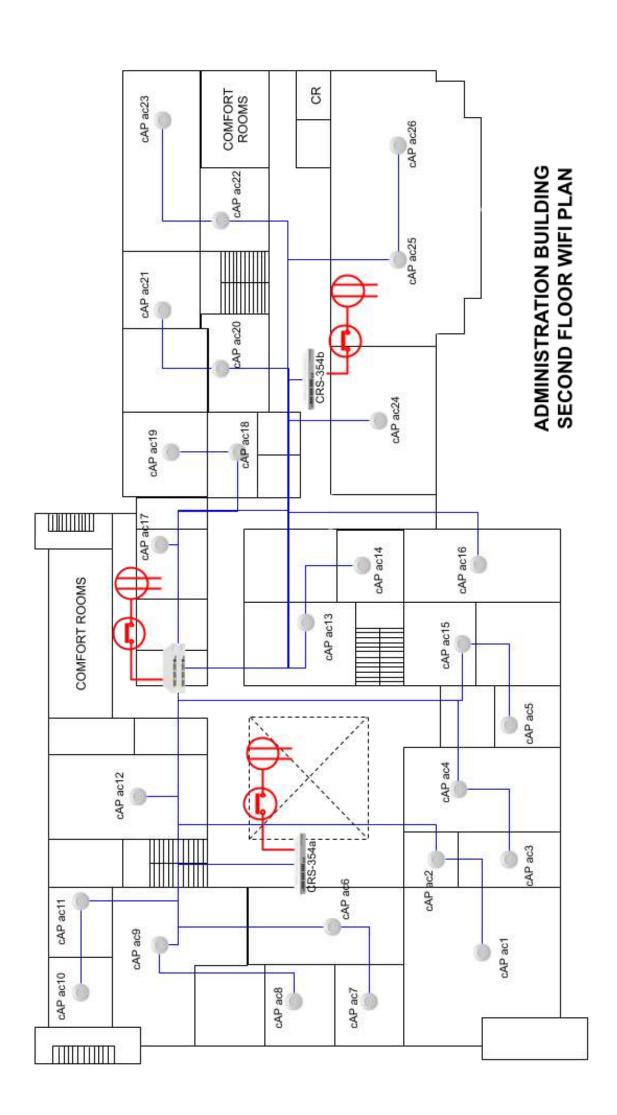




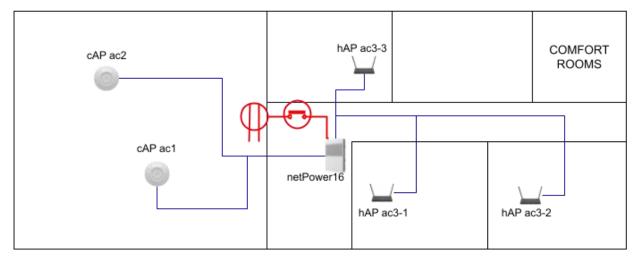
ANIMAL HOSPITAL

## **Administration Building**



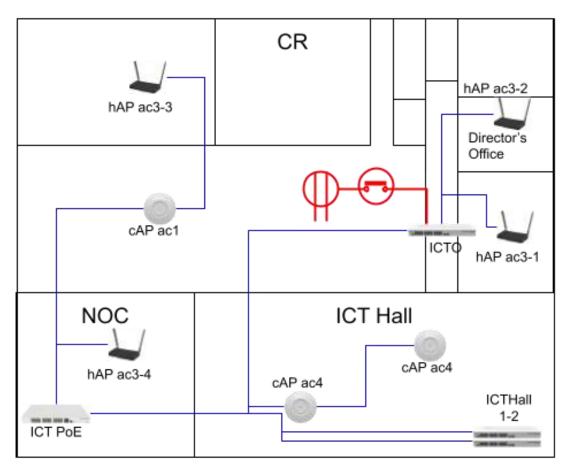


#### **Board of Regents Building**



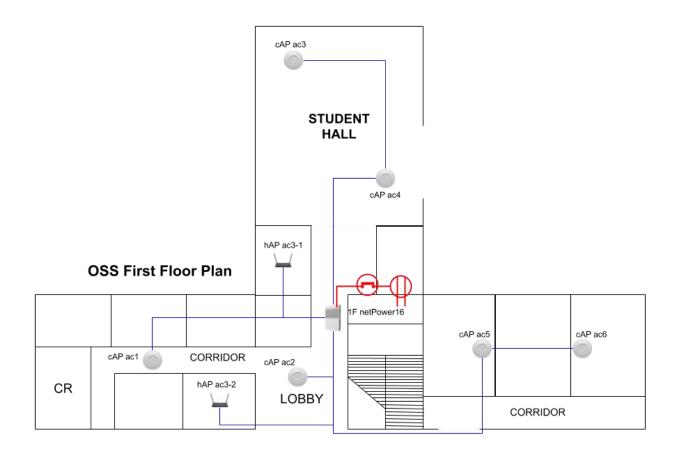
**Board of Regents Building Floor Plan** 

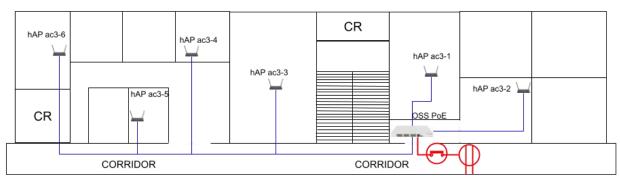
#### **ICT Office**



ICT Office, Library Annex First Floor

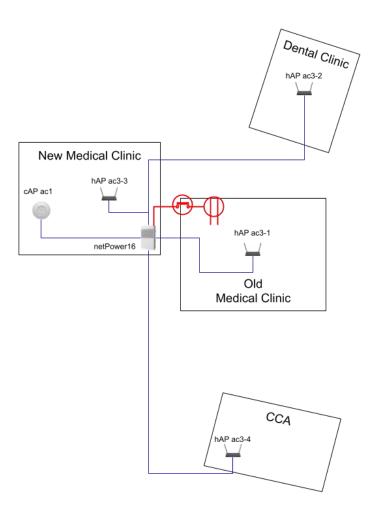
#### **Office for Student Services**



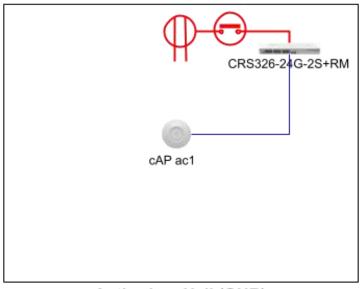


**OSS Second Floor Plan** 

## **University Health Services and Center for Culture & Arts**

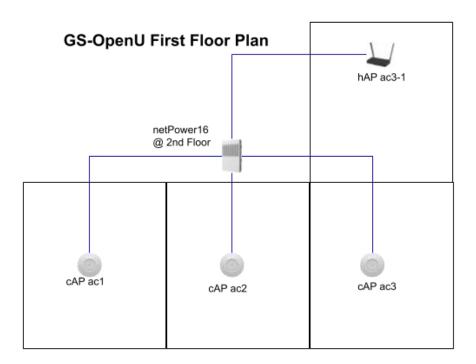


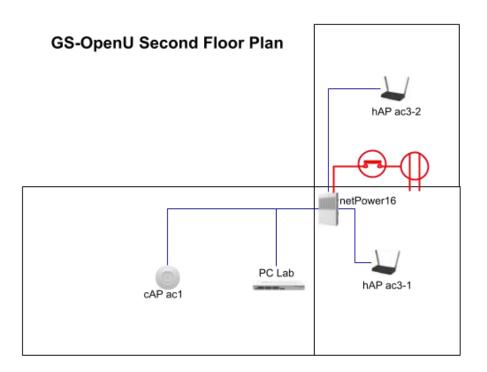
# **Anthurium Hall (Temporary Office of the University Registrar)**



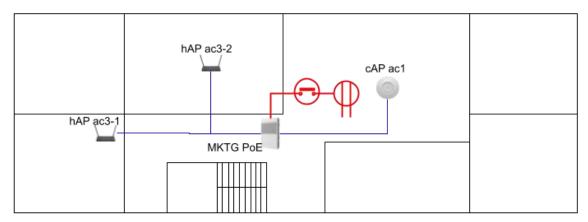
Anthurium Hall (OUR)

# **Graduate School and Open University**

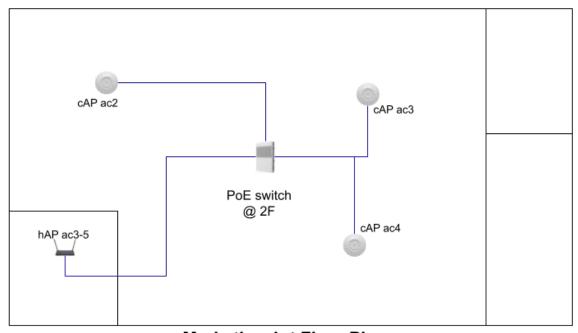




## **Marketing Center**



Marketing 2nd Floor Plan



Marketing 1st Floor Plan